Version

2

User's Manual

DBS

Diagnostic Base Station

V 32.0

DBS User's Manual

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Note: An electronic version of this manual is available on the VCM CD or at the Internet location in which DBS software is obtained.

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Definitions, Acronyms, and Abbreviations

- DBS — Diagnostic Base Station. Software that is necessary to load and transfer files to the VCM
- LAN — Local Area Network
- LED — Light Emitting Diode
- NGS — New Generation Star Tester (NGS Classic)
- NGS+ — Product name for the VCM when combined with the Caddy and used with the NGS T-Handle
- OTS — Off the shelf
- PC — Personal Computer
- RJ 45 — Registered Jack–45 commonly used to connect PCs with LANS especially Ethernet Connections
- SW — Software
- TIS — Technical Information Support Hotline
- USB — Universal Serial Bus
- VCM — Vehicle Communication Module
- VIN — Vehicle Identification Number

Symbols

- Ethernet
- USB

Introduction

The Diagnostic Base Station PC (DBS PC) is a dealer provided PC loaded with DBS software. It updates the VCM with the NGS+ software it needs to communicate with a vehicle when used with the NGS+ T-handle. This manual provides instructions for installing the DBS software on a PC and downloading NGS+ software to a VCM.

DBS Functions

The primary functions of the Diagnostic Base Station software are to:

- Manage the download of NGS+ software to a VCM
- Manage the download of NGS+ software from the Ford server to a PC
- Check for new versions of DBS software via the Internet

DBS software can be installed via the Internet or CD-ROM.

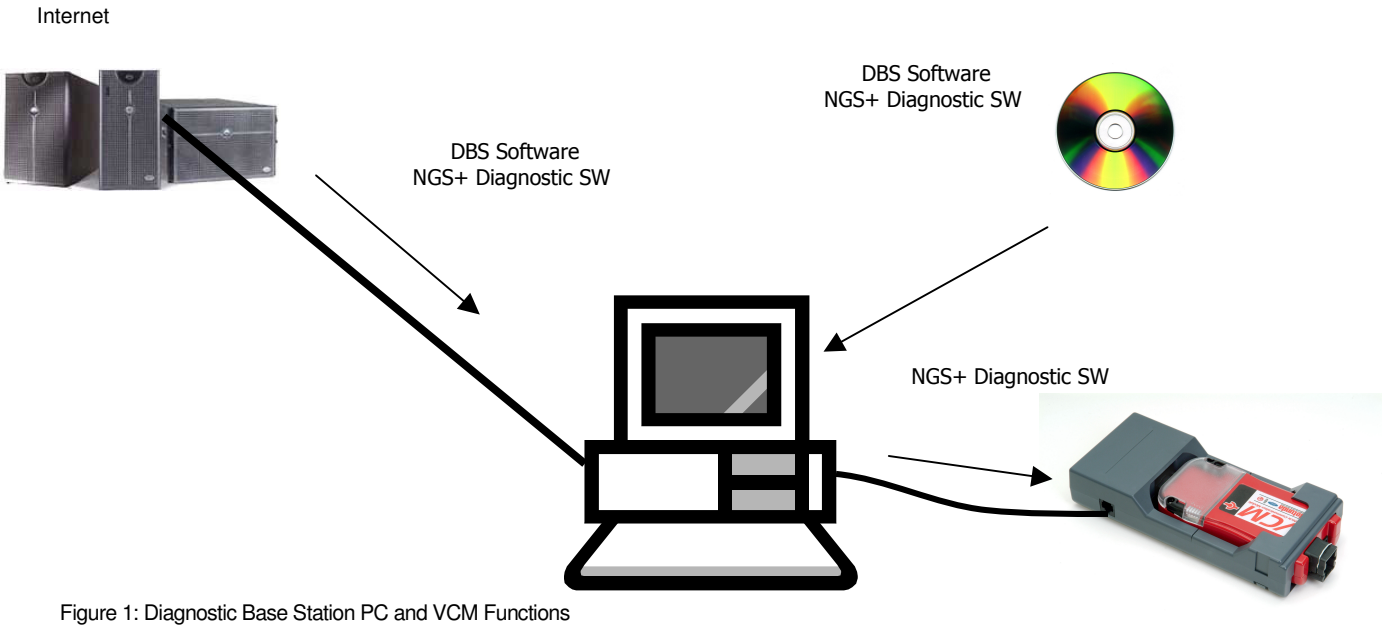


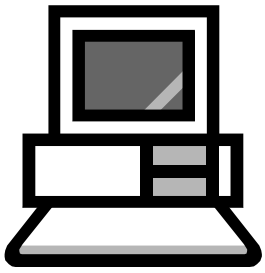
Figure 1: Diagnostic Base Station PC and VCM Functions

DBS Requirements

In order for the DBS software to function be sure that all of the components and systems used with the DBS software meet the requirements listed in the following sections.

Hardware Requirements

DBS requires the following hardware components:



PC (PC specifications listed in System Requirements Section of DBS User's Manual)

Off-the-Shelf Ethernet Cable (Ethernet Patch Cable)

Off-the-Shelf USB Cable (USB Device Cable)

VCM Power Supply Unit

VCM & Caddy

VCM CD

Figure 2: Hardware Requirements

PC Requirements

Operating System Requirements

Microsoft Windows 98, or

Microsoft Windows 2000 Professional, or

Microsoft Windows XP

Microsoft .NET Framework Version 1.1 (See note)

Microsoft Internet Explorer 6.0 or later (See note)

Adobe Acrobat Reader 5.1 or later (See note)

Note: These applications need to be downloaded and installed separately by the user when doing a web install of DBS. They are automatically installed on the DBS PC when DBS is installed from the VCM CD.

PC Hardware Requirements

Required Processor: Pentium 90 MHz

Recommended Processor: Pentium 90 Mhz or faster

Required RAM: 32 MB or the minimum required by the operating system, whichever is higher

Recommended RAM: 96 MB or higher

USB Connection (available in a later release)

Ethernet connection

CD-ROM drive

Chapter 1

Getting Started

Installing DBS Software from a CD

Begin the initial DBS software installation by inserting the VCM CD into the CD-ROM drive on your PC. The DBS installation program should automatically start up. If the installation program does not start up automatically, click on **My Computer**, select the **CD-ROM drive with the VCM CD** and click on **setup.exe**.

The directions on the screens will guide you through the installation.

Note: Windows 2000 users may see the dialog box below.

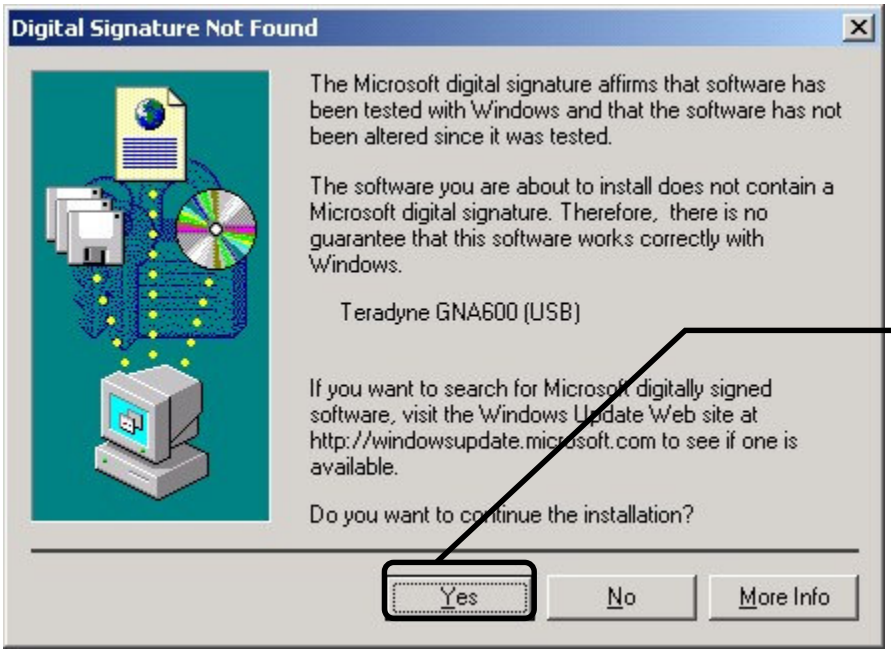

Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
Teradyne GNA600 (USB)
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
Do you want to continue the installation?
Yes
No
More Info
Select Yes.

Figure 3: Digital Signature Not Found

Note: Windows XP users may see the dialog box below.

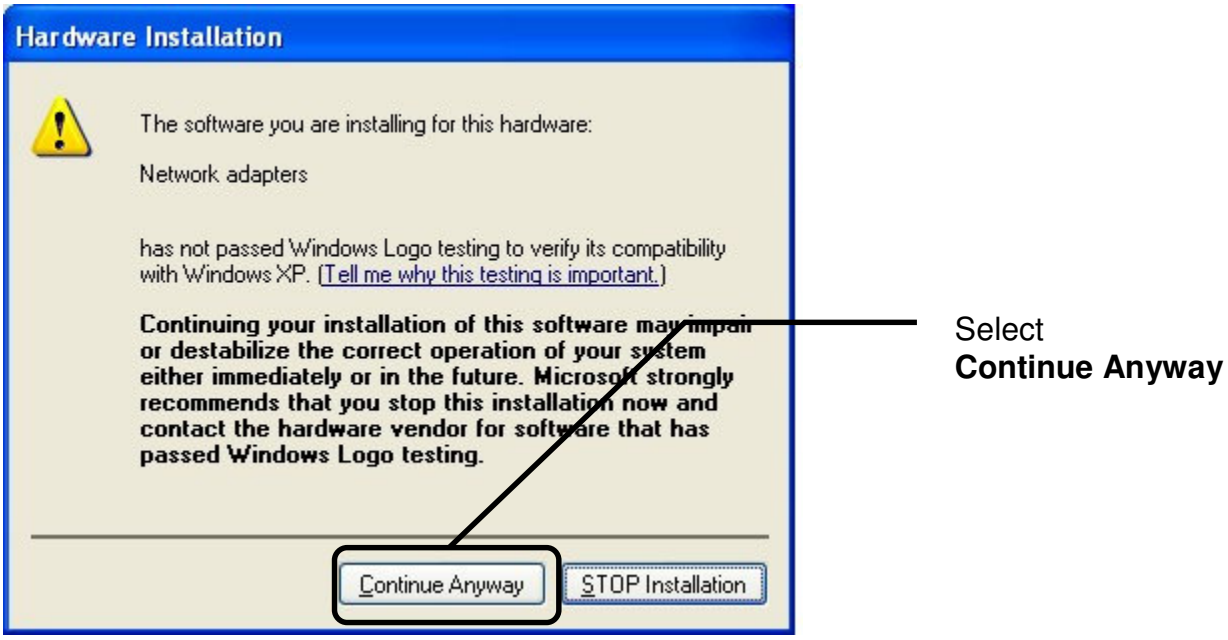

Hardware Installation
The software you are installing for this hardware:
Network adapters
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation
Select
Continue Anyway

Figure 4: Hardware Installation

Chapter 2

Updating the VCM with the Latest NGS+ Software

DBS is designed to work with the VCM and NGS+. Its major function is to update the VCM with the latest NGS+ software.

NGS+ is made up of the following three components:

VCM CD + VCM & Caddy + NGS T-Handle

Updating the VCM With the Latest NGS+ Software

Step 1: Connect the VCM to the DBS PC using the Ethernet cable. Do not power up the VCM at this time.

See Chapter 3 – Connecting the VCM to the DBS PC if you need assistance connecting the VCM to the DBS PC.

Step 2: Configure the DBS PC

See *Chapter 4 – Configuring the DBS PC to Use Ethernet* if you need assistance configuring the DBS PC.

Step 3: Update VCM with the latest NGS+ software

Follow the instructions in the next section to install or update the NGS+ software on your VCM.

IMPORTANT: If the DBS PC has a firewall program running, please temporarily disable it. DBS will not function properly if a firewall program is running.

Below is a partial list of common firewall software that might be installed on the DBS PC:

- Windows XP Built-in Firewall
- Zone Alarm
- BlackICE
- McAfee Personal Firewall Plus
- Norton Personal Firewall
- Armor2net
- eTrust
- Outpost
- PC-cillin

Installing/ Updating the NGS+ Software

Figure 5: Diagnostic Base Station Welcome Screen

Double click on the DBS icon

on the desktop to start.

Click on **Update VCM With Latest NGS+ Software** on the Welcome Screen

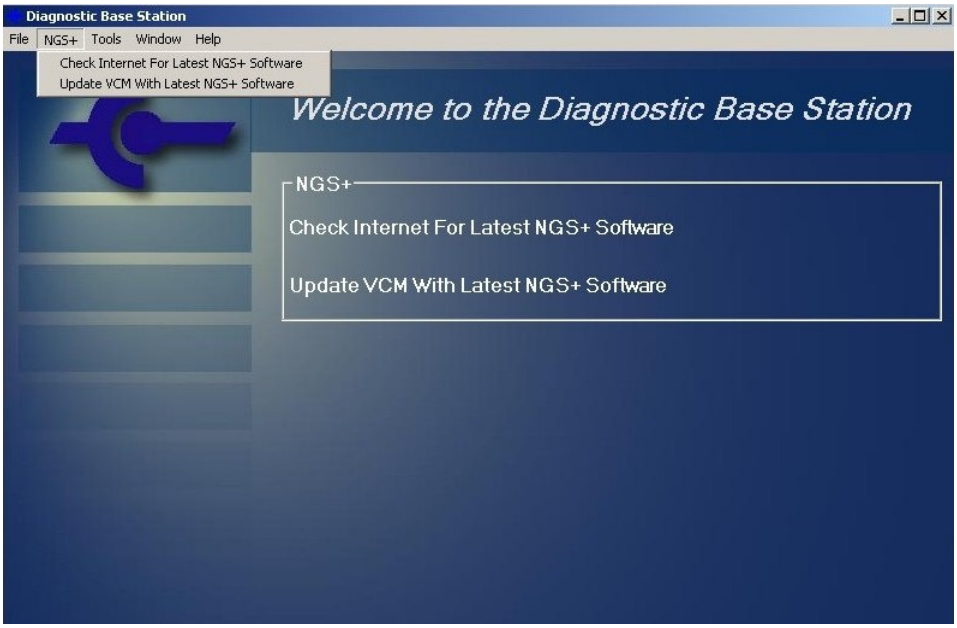

Diagnostic Base Station
File NGS+ Tools Window Help
Check Internet For Latest NGS+ Software
Update VCM With Latest NGS+ Software
Welcome to the Diagnostic Base Station
NGS+
Check Internet For Latest NGS+ Software
Update VCM With Latest NGS+ Software

Figure 6:Selecting NGS+, Update Software from DBS menu bar

OR

select **NGS+** then **Update VCM With Latest NGS+ Software** from the DBS menu.

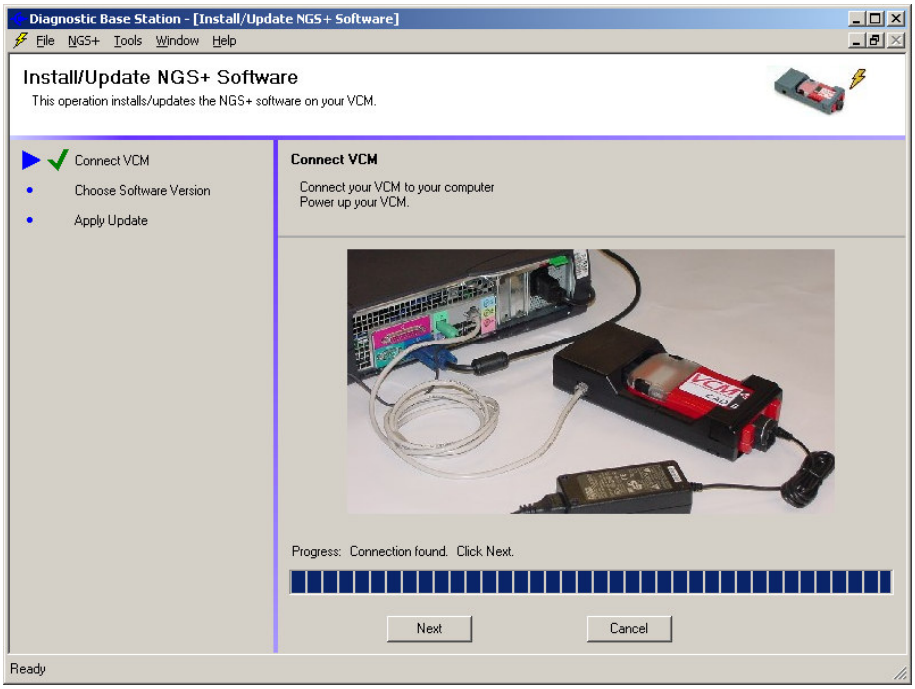


Figure 7: Install/Update NGS+ Software - Connect VCM Screen

Power up the VCM.

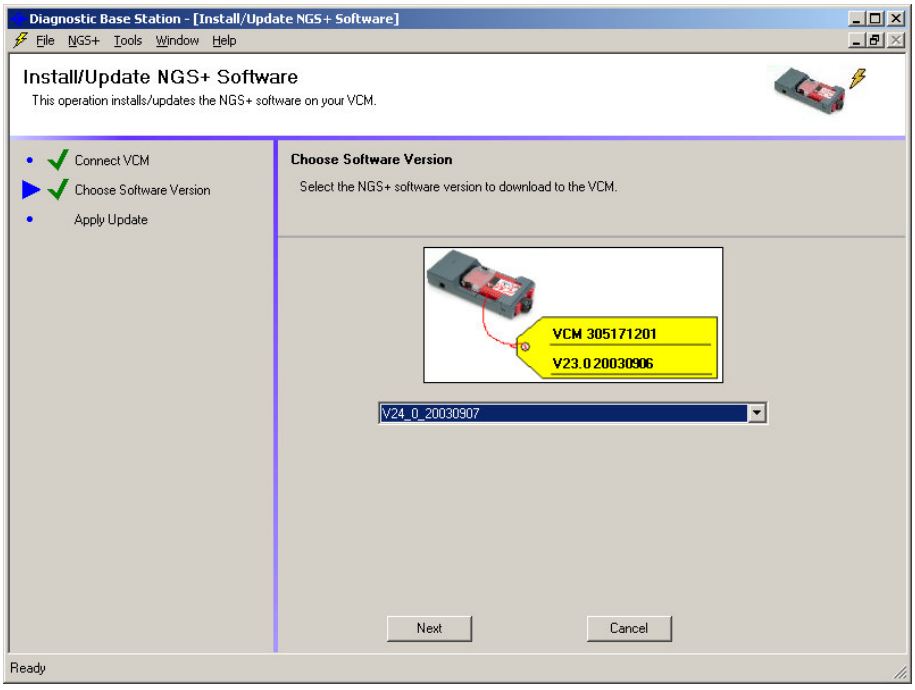
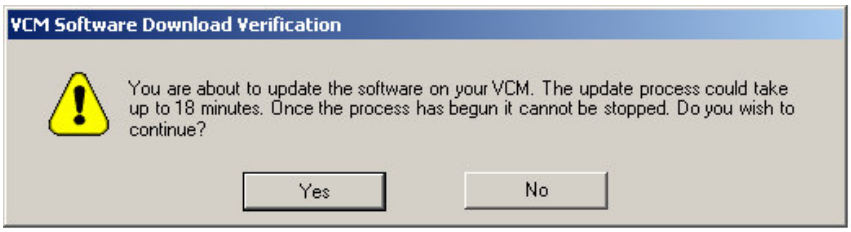


Figure 8: Install/Update NGS+ Software – Choose Software Version Screen

The DBS software will display the VCM files that can be selected for download to the VCM.

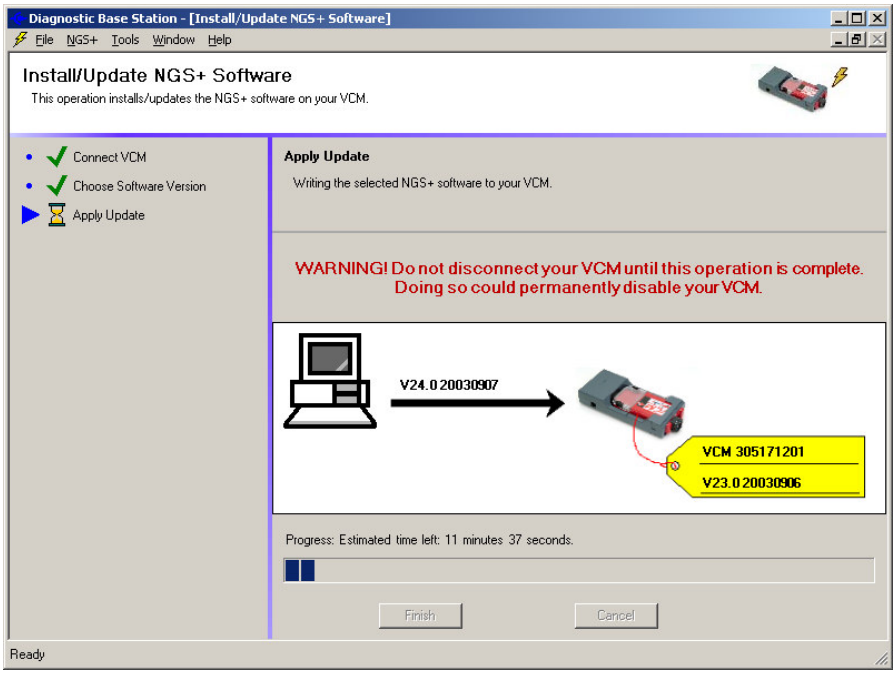
LED lights will flicker as the DBS PC and the VCM communicate.

An explanation of the LED lights can be found in the **LED Status Indicators** section of the **VCM Hardware Manual**.


VCM Software Download Verification
You are about to update the software on your VCM. The update process could take up to 18 minutes. Once the process has begun it cannot be stopped. Do you wish to continue?
Yes
No

Select **Yes** to continue.

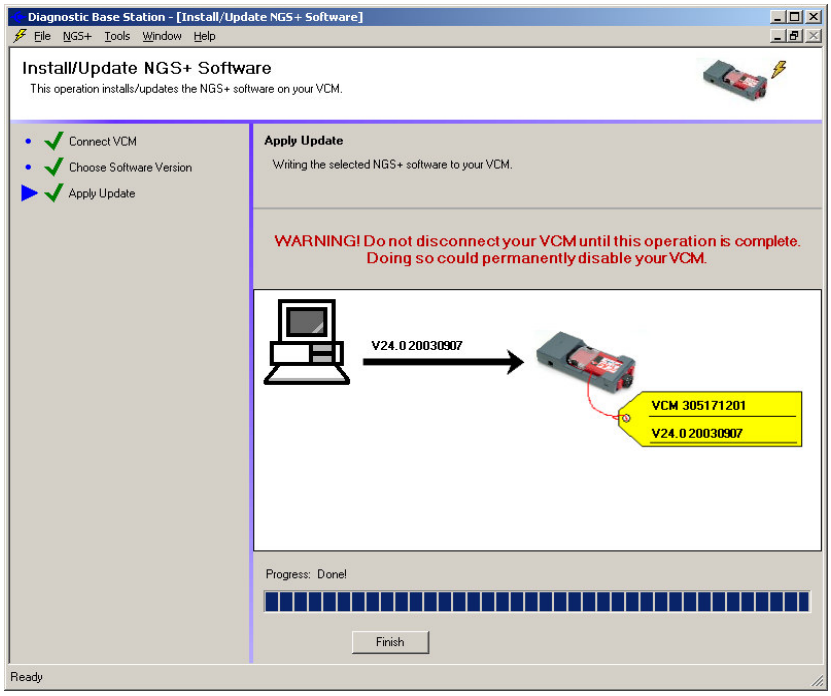
Figure 9: VCM Software Download Confirmation


Diagnostic Base Station - [Install/Update NGS+ Software]
File NGS+ Tools Window Help
Install/Update NGS+ Software
This operation installs/updates the NGS+ software on your VCM.
Connect VCM
Choose Software Version
Apply Update
Apply Update
Writing the selected NGS+ software to your VCM.
WARNING! Do not disconnect your VCM until this operation is complete. Doing so could permanently disable your VCM.
V24.0 20030907
VCM 305171201
V23.0 20030906
Progress: Estimated time left: 11 minutes 37 seconds.
Finish
Cancel
Ready

A progress bar will be displayed while the NGS+ software is being downloaded to the VCM.

Do not disconnect your VCM until the operation is complete. Doing so could permanently disable your VCM.

Figure 10: Install/Update NGS+ Software - Apply Update Screen



Select **Finish** when the update is done.

Figure 11: Install /Update NGS+ Software - Apply Update Completion Screen

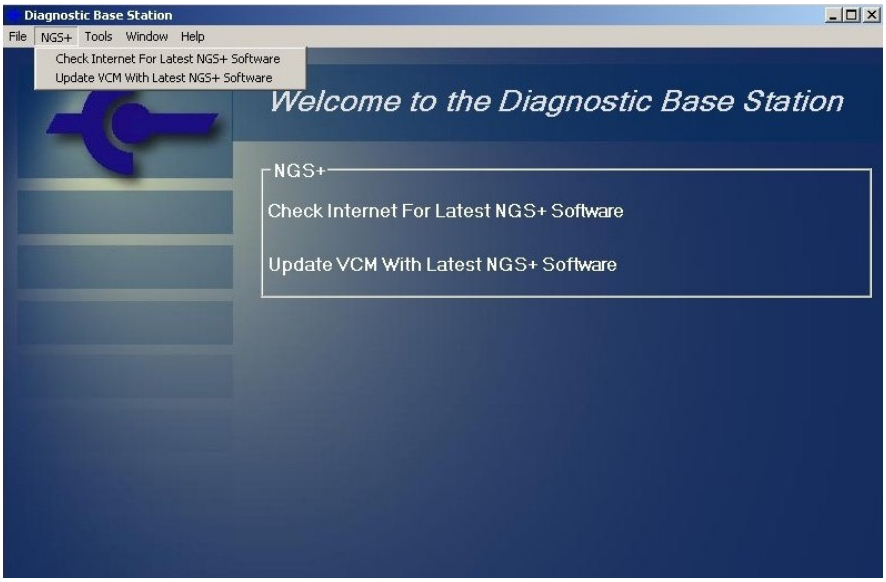
Once the file has been downloaded successfully, first disconnect the VCM Power Supply Unit, then the VCM/Caddy assembly from the DBS PC.

- When using an Ethernet cable to connect the VCM to the DBS PC, follow the directions in the *Chapter 4 – Configuring the DBS PC to Use Ethernet* to restore the IP address, Subnet mask, and Installed gateways to the values you recorded earlier. Select *Obtain an IP address automatically* if that was the option being used on your computer. ***Failure to restore the original IP address will result in the computer not being able to communicate with your network.***

- The VCM /Caddy is now ready to be used with the NGS T-handle.

Retrieving NGS+ Updates from the Internet

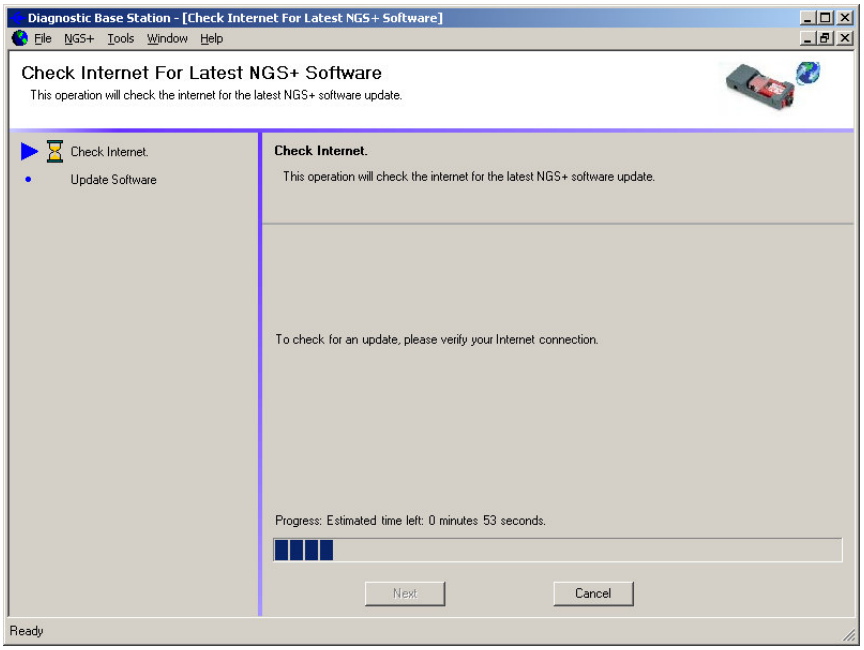
Periodically, a new NGS+ software file will be available for download over the Internet. This section describes how to check for, and download, the latest NGS+ software file to the DBS PC.


Diagnostic Base Station
File NGS+ Tools Window Help
Check Internet For Latest NGS+ Software
Update VCM With Latest NGS+ Software
Welcome to the Diagnostic Base Station
NGS+
Check Internet For Latest NGS+ Software
Update VCM With Latest NGS+ Software

Select
NGS+

Check Internet For Latest NGS+ Software

Figure 12: Select Check Internet For Latest NGS+ Software


Diagnostic Base Station - [Check Internet For Latest NGS+ Software]
File NGS+ Tools Window Help
Check Internet For Latest NGS+ Software
This operation will check the internet for the latest NGS+ software update.
Check Internet.
Update Software
Check Internet.
This operation will check the internet for the latest NGS+ software update.
To check for an update, please verify your Internet connection.
Progress: Estimated time left: 0 minutes 53 seconds.
Next
Cancel
Ready

Make sure your PC is connected to the Internet.

Figure 13: Check Internet For Latest NGS+ Software – Check Internet Screen

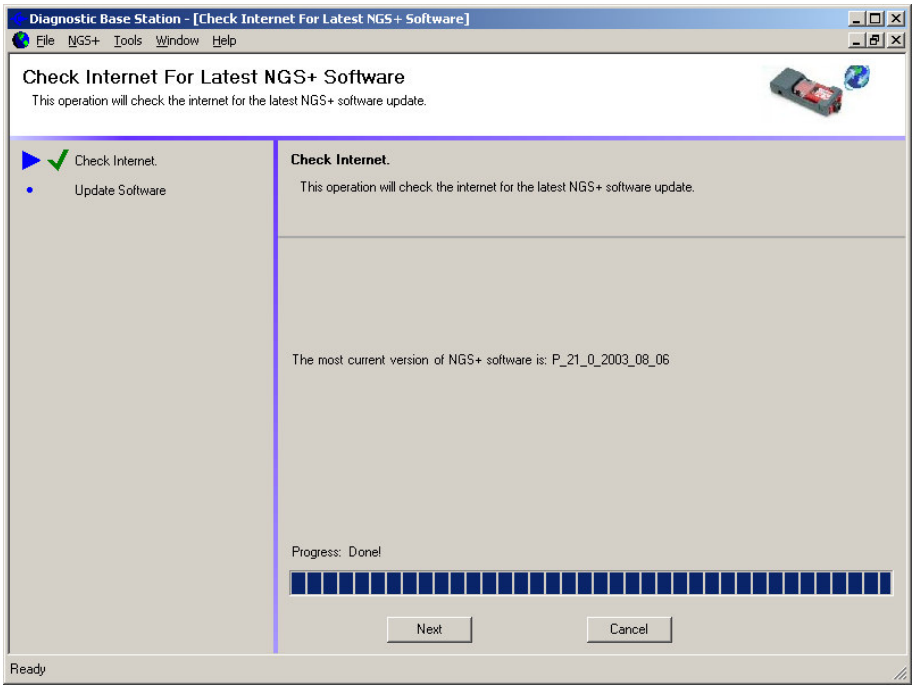

Diagnostic Base Station - [Check Internet For Latest NGS+ Software]
File NGS+ Tools Window Help
Check Internet For Latest NGS+ Software
This operation will check the internet for the latest NGS+ software update.
Check Internet.
Update Software
Check Internet.
This operation will check the internet for the latest NGS+ software update.
The most current version of NGS+ software is: P_21_0_2003_08_06
Progress: Done!
Next
Cancel
Ready

Figure 14: Check Internet For Latest NGS+ Software – Check Internet Done Screen

The DBS software will display the latest available version of DBS software.

Select **Next.**

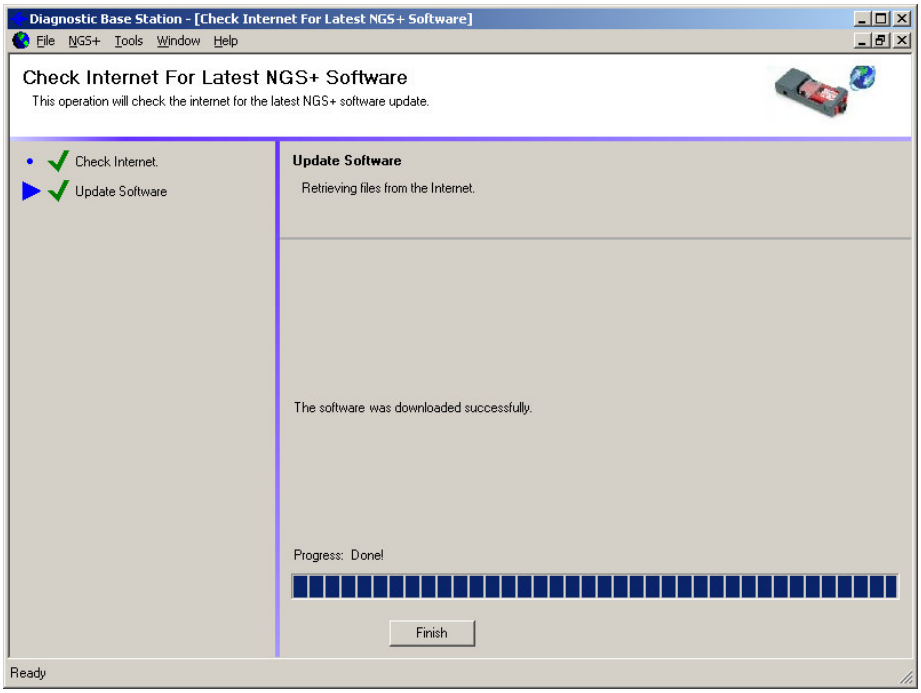

Diagnostic Base Station - [Check Internet For Latest NGS+ Software]
File NGS+ Tools Window Help
Check Internet For Latest NGS+ Software
This operation will check the internet for the latest NGS+ software update.
Check Internet.
Update Software
Update Software
Retrieving files from the Internet.
The software was downloaded successfully.
Progress: Done!
Finish
Ready

Figure 15: Check Internet For Latest NGS+ Software - Update Software Screen

Select **Finish** when the download of the NGS+ software update is complete.

Chapter 3

Connecting the VCM to the DBS PC

Connecting the VCM to the DBS PC using Ethernet

- Remove power from the VCM and Caddy assembly and slide it out of the NGS T-handle.

- Connect one end of the Ethernet Cable to the PC by using the jack with the symbol. Connect the other end of the cable to the Caddy Ethernet connector.

Note: Do not power up the VCM until instructed by the DBS software.
Note: Do not connect the Ethernet cable to a hub. It must be connected to the DBS PC.

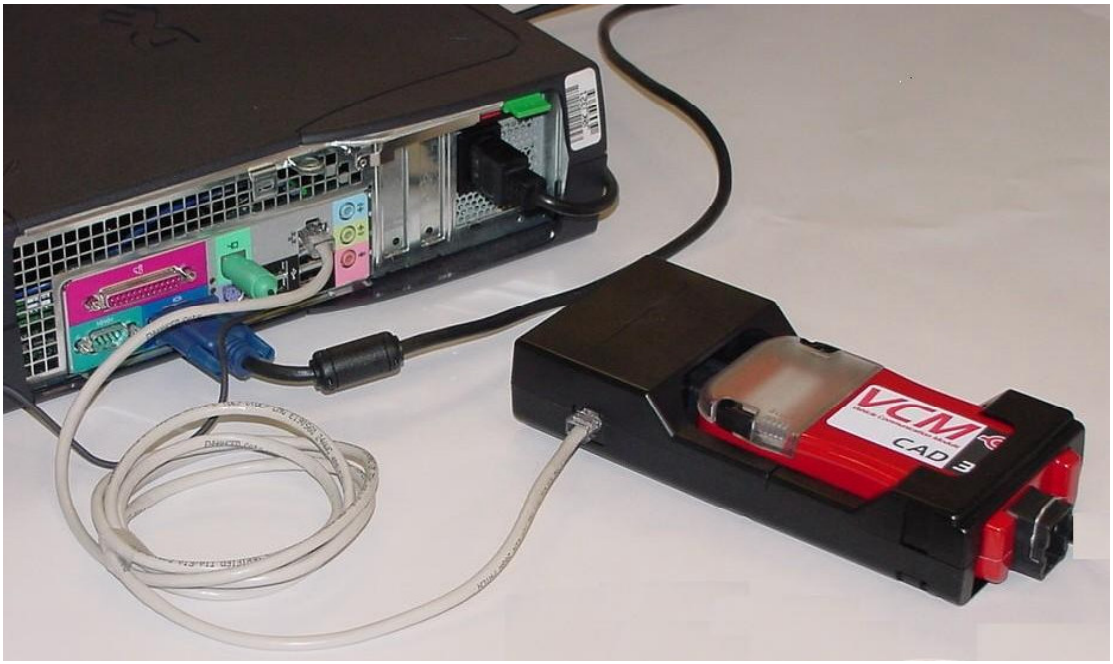


Figure 16: Connecting the VCM to the DBS PC Using Ethernet

Chapter 4

Configuring the DBS PC to Use Ethernet

Configuring the DBS PC to Use Ethernet

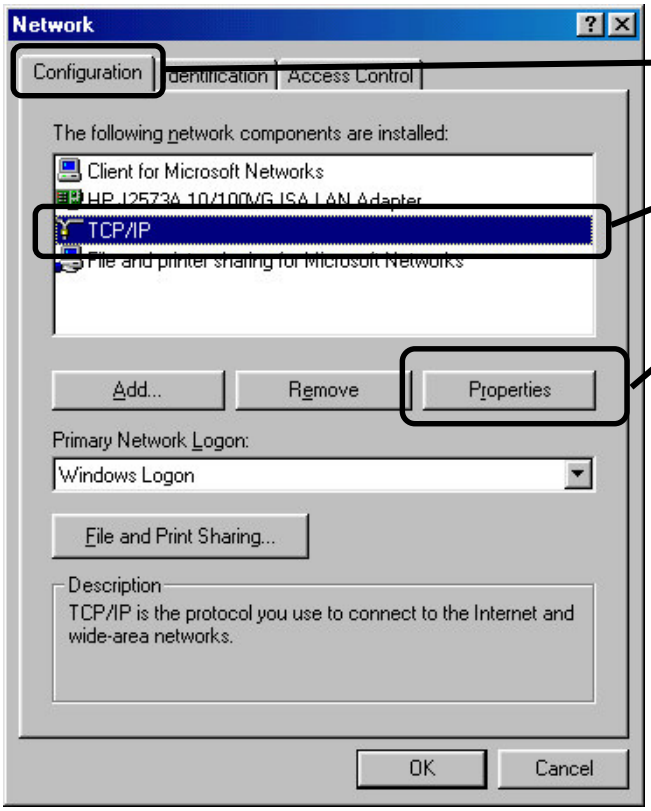
The DBS PC will need to be configured to use Ethernet whenever it communicates with the VCM. Follow the instructions that follow for the operating system on the DBS PC.

Update Ethernet LAN Configuration for Windows 98

1 Select:
Start
Settings
Control Panel.

2 Double click on the **Network** icon.

Figure 17: Control Panel icons for Windows 98

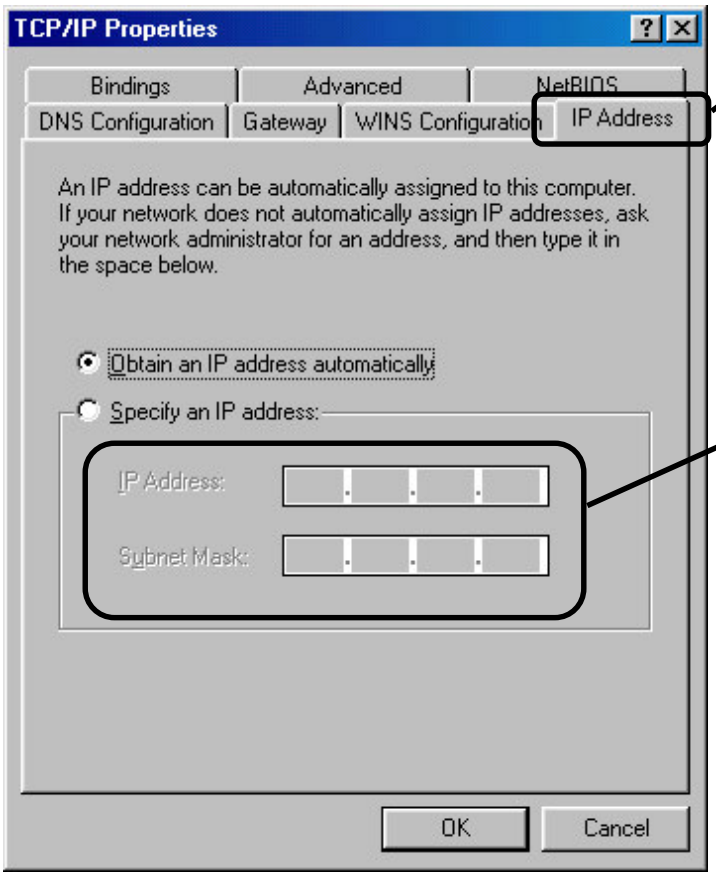


1 Select **Configuration** tab.

2 Highlight **TCP/IP.**

3 Click on **Properties**

Figure 18: TCP/IP Properties Screen for Windows 98


TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.
Obtain an IP address automatically
Specify an IP address:
IP Address:
Subnet Mask:
OK
Cancel

1 Record any numbers found under the IP address tab.

2 These numbers will be needed to reset the IP address and subnet mask once the DBS PC is no longer connected to the VCM.

Figure 19: TCP/IP Properties Screen for Windows 98 – IP Address

If any numbers appear for *IP address* record them here now:

_____ . _____ . _____ . _____

If any numbers appear for *Subnet Mask* record them here now:

_____ . _____ . _____ . _____

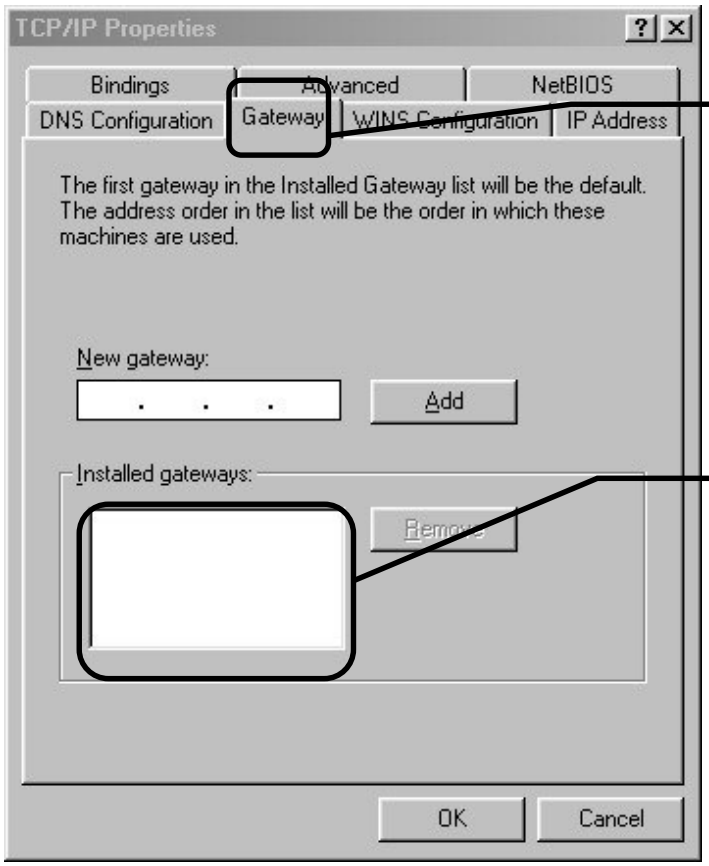

TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
The first gateway in the Installed Gateway list will be the default. The address order in the list will be the order in which these machines are used.
New gateway:
Add
Installed gateways:
Remove
OK
Cancel
1 Record any numbers found under the Gateway tab.
2 Any numbers will be needed to reset the Installed gateways once the DBS PC is no longer connected to the VCM.

Figure 20: TCP/IP Properties Screen for Windows 98 - Gateway

If any numbers appear for *Installed gateways* record them here now:

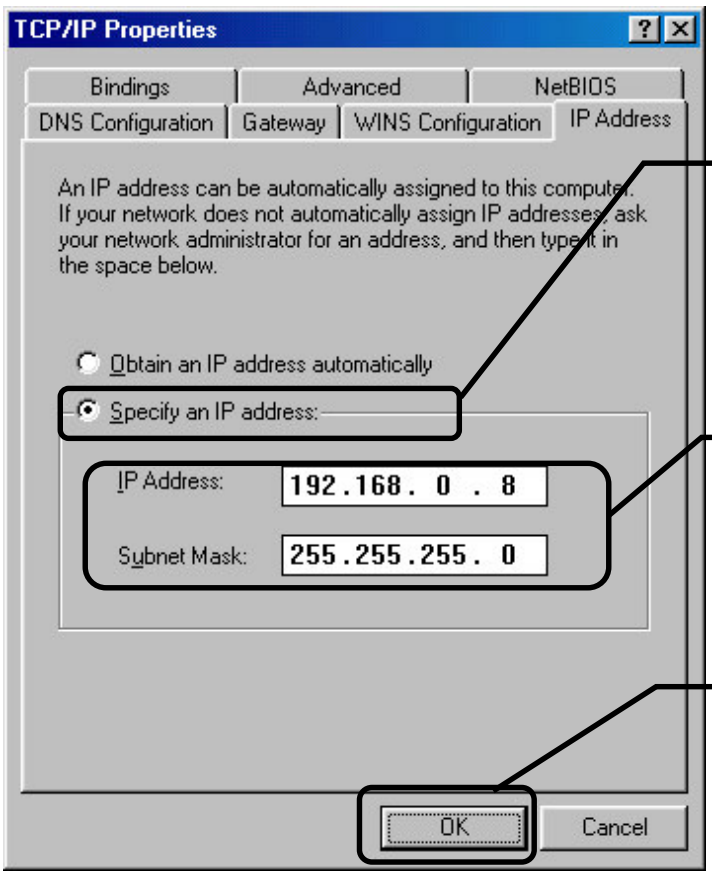
_____ . _____ . _____ . _____

_____ . _____ . _____ . _____

_____ . _____ . _____ . _____

_____ . _____ . _____ . _____

These numbers will be needed to reset the IP address, Subnet Mask, and Installed gateways once the DBS is no longer connected to the VCM.



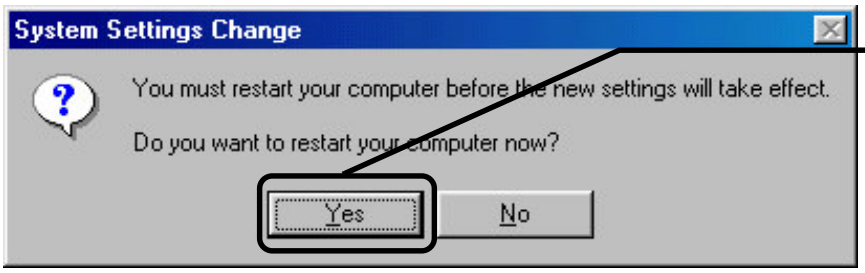
1 Select **Specify an IP address** .

Use the following for VCM and DBS communication.

2 Set
IP Address: 192.168.0.8
Subnet Mask: 255.255.255.0

3 Select **OK**

Figure 21: TCP/IP Properties Screen for Windows 98 with IP address needed for VCM


System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

1 Select **Yes**.

2 After the restart, the VCM should be ready to communicate with the DBS.

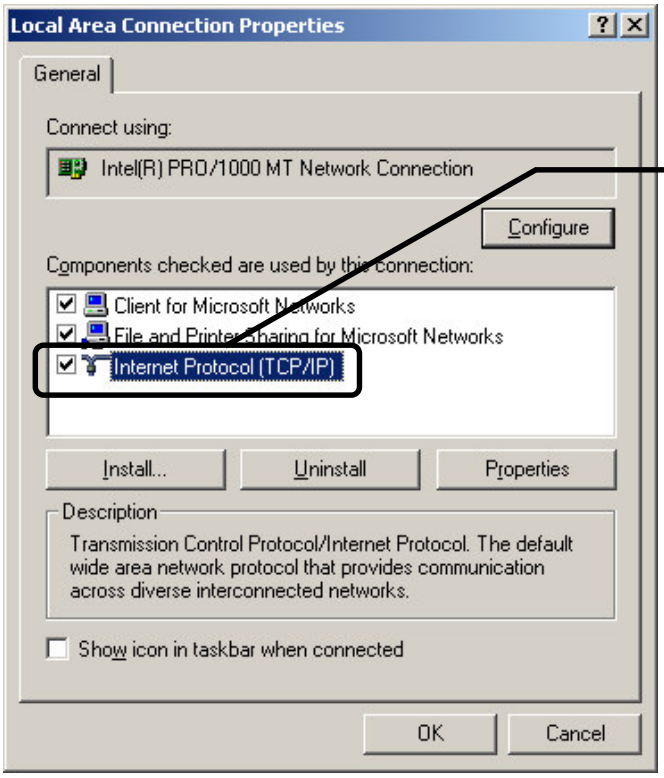
Figure 22: Systems Settings Change Screen for Windows 98

Update Ethernet LAN Configuration for Windows 2000 Professional or Windows XP

NOTE: Administrator privileges are required to change the IP address.

Windows 2000 Professional	Window XP
Select **Start** **Settings** **Network and Dial-Up Connections** **Local Area Connection Properties** The following screen should be displayed	Select **Start** **Control Panel** **Network and Internet Connections** **Network Connections.** Double click on **Local Area Connection**. The following screen should be displayed

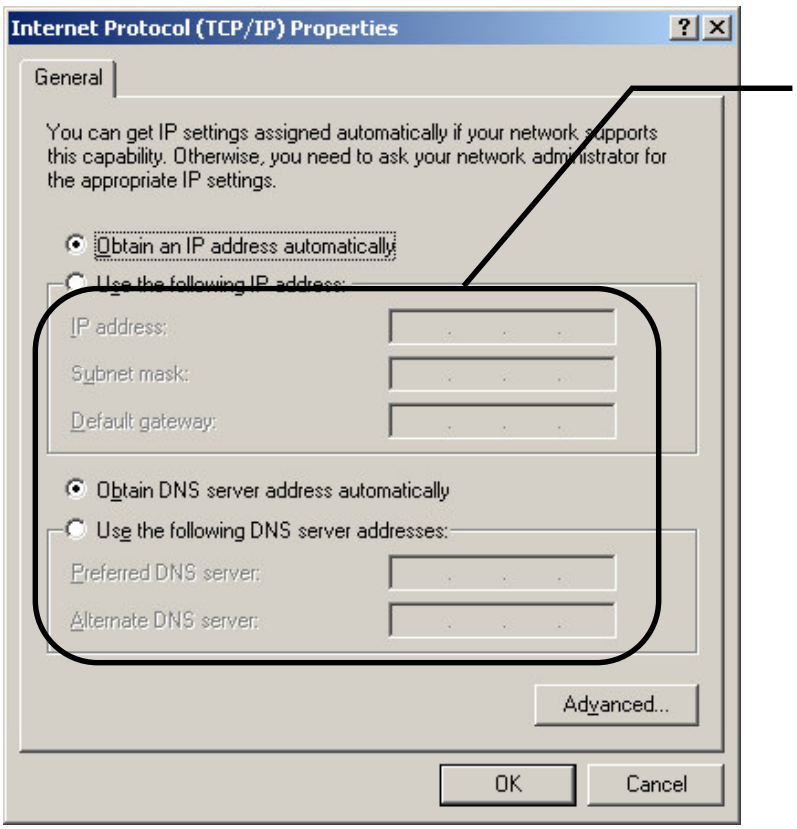
Directions for both Windows 2000 Professional and Windows XP are the same from this point forward.



1 Double click on **Internet Protocol (TCP/IP)**.

2 The IP address which allows communication between the VCM and the DBS will be entered on the following screen.

Figure 23: Local Area Connection Properties Screen for Windows 2000 & XP


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

1 Record any numbers currently displayed on this screen.

2 These numbers will be needed to reset the IP address and subnet mask once the DBS PC is no longer connected to the VCM.

Figure 24: Internet Protocol (TCP/IP) Properties Screen for Windows 2000 & XP

If any numbers appear for *IP address* record them here now:

____ . ____ . ____ . ____

If any numbers appear for *Subnet mask* record them here now:

____ . ____ . ____ . ____

If any numbers appear *for Default Gateway* record them here:

____ . ____ . ____ . ____

If any numbers appear for *Preferred DNS Server* record them here:

____ . ____ . ____ . ____

If any numbers appear for *Alternate DNS Server* record them here:

____ . ____ . ____ . ____

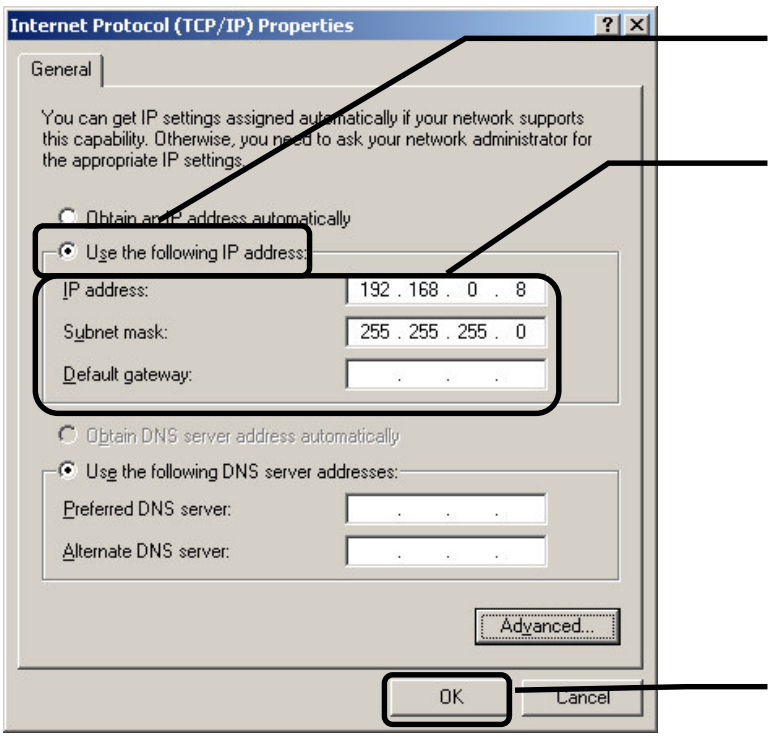

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 0 . 8
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Figure 25: Internet Protocol (TCP/IP) Properties with address for VCM Communication

1 Select **Use the following IP address**.

2 Use the following for VCM and DBS communication:

IP Address: 192.168.0.8
Subnet Mask: 255.255.255.0
Default Gateway: ___.___.___.___

Confirm that the numbers are correct.

DNS settings do not need to be changed for NGS+.

3 Select **OK.**

Select **OK.**

Close the Local Area Connection Status window to complete the process then restart the system.

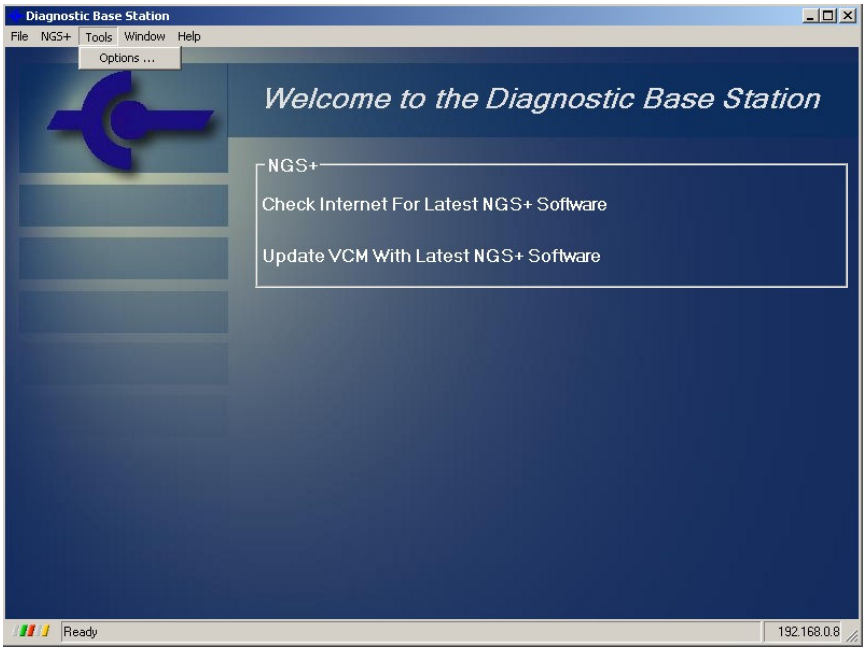
After the restart, the VCM should be ready to communicate with the DBS.

Chapter 5

Tools

Options - Language

Text appearing in DBS screens can be viewed in three different languages: English (United States), French (Canada) and Spanish (Mexico). A default language is set during the installation of DBS software. The language can also be changed at any time within DBS to accommodate users who prefer a language that differs from the default.



Select
Tools
Options ...

Figure 26: Setting Options in DBS

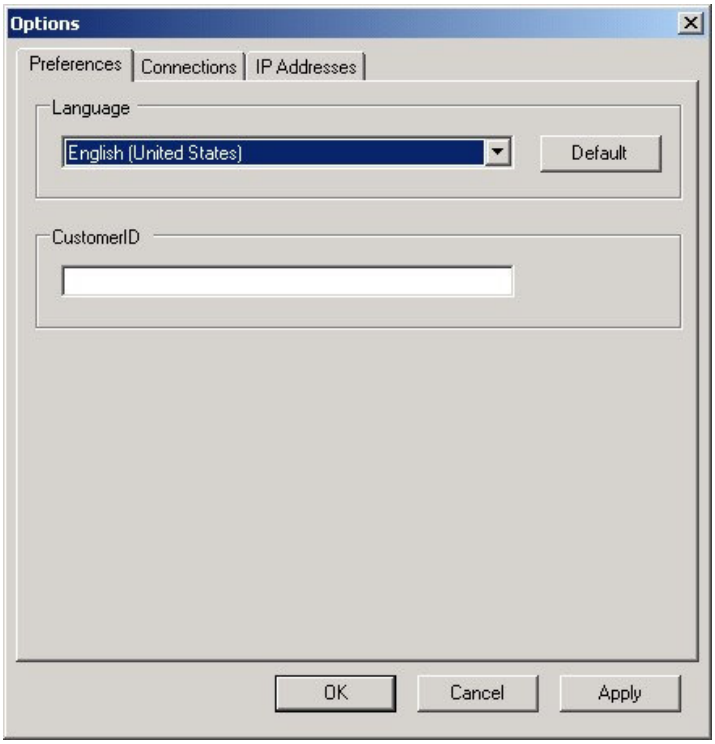


Figure 27: Display Languages Available

Select the **Preferences** tab.

Click on the down arrow to display the languages available in the drop down box.

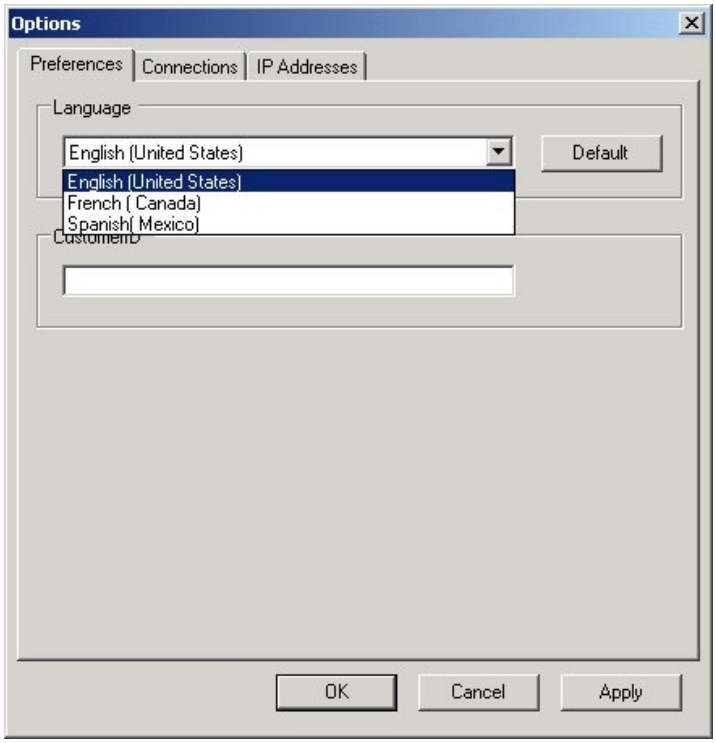


Figure 28: Select a Language

Highlight the desired language.

Select **OK**.

Options - Connections

You may need to configure a proxy server to access the internet.

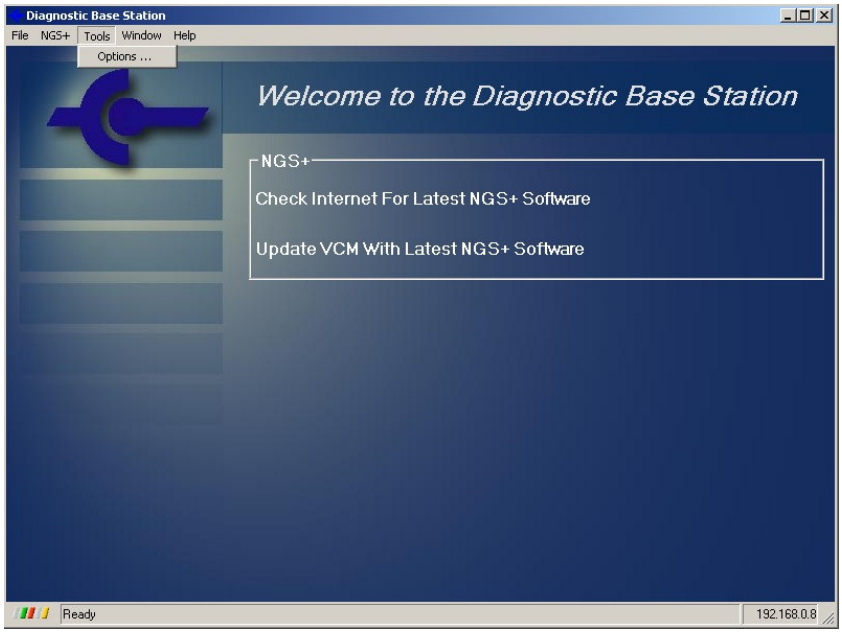


Figure 29: Setting Options in DBS

Select
Tools
Options ...

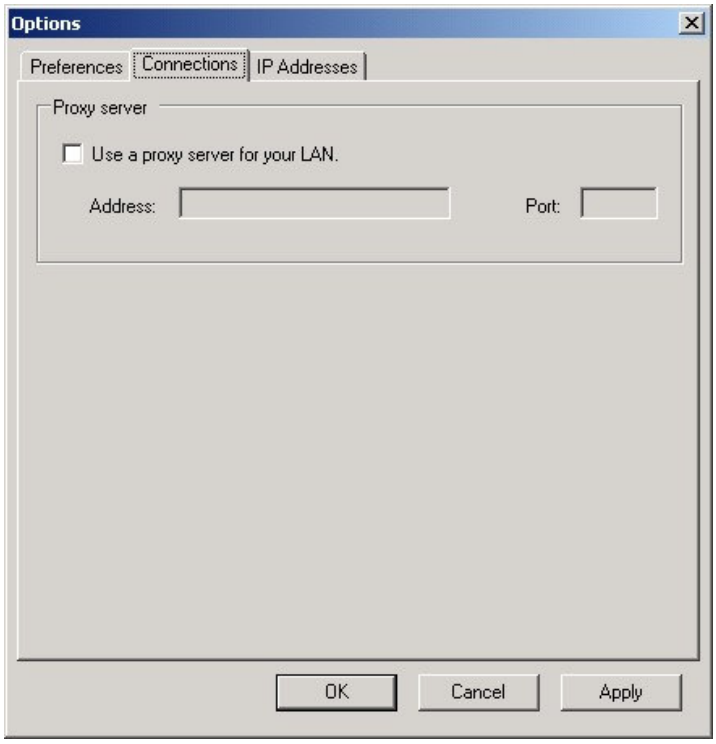


Figure 30: Proxy Server Screen

Select the
Connections tab.

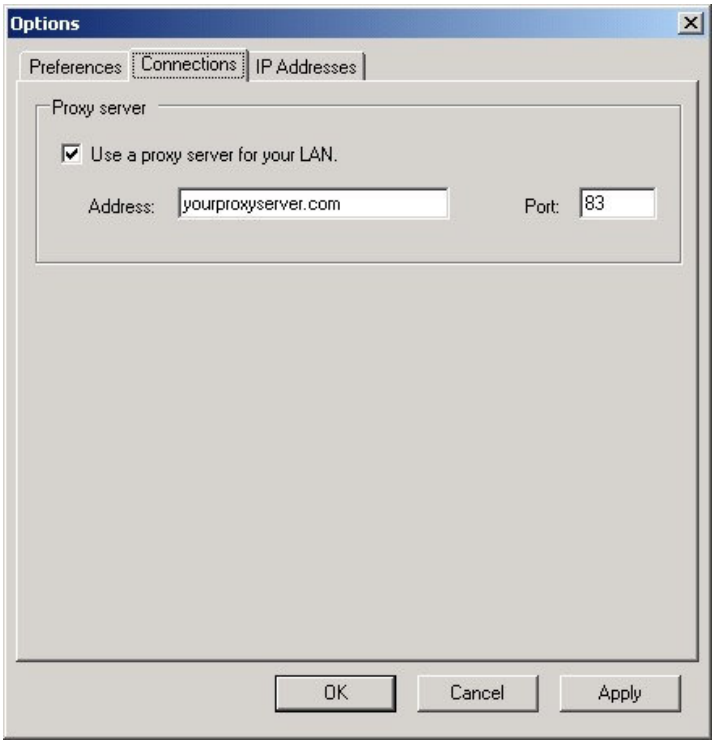


Figure 31: Set Proxy Server Address and Port Number

Check the box labeled **Use a proxy server for your LAN.**

Enter your **proxy server address** and **port number**.

Click **OK** so that your settings are registered.

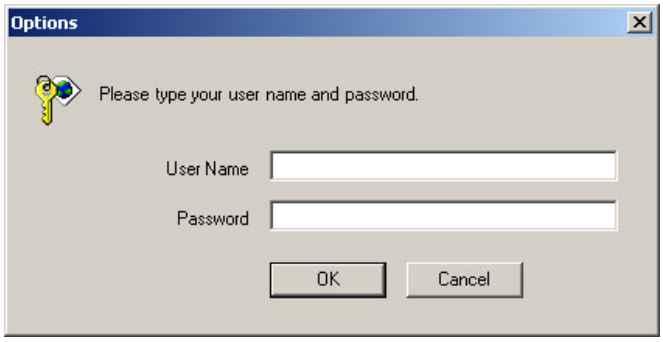
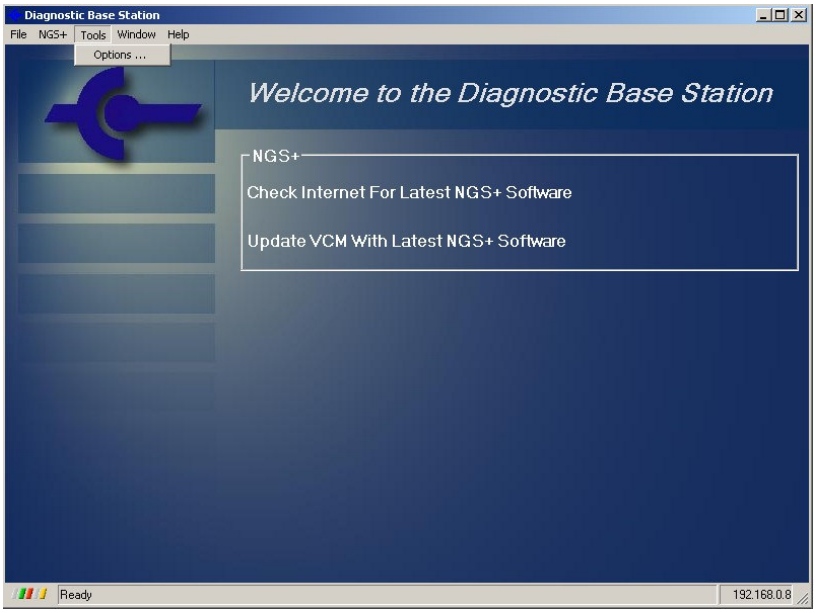


Figure 32: User Name and Password Request

DBS may prompt you to enter your User Name and Password for the proxy server when accessing the Internet.

This information will need to be entered once each time you use DBS.

Options – IP Addresses



Select
Tools
Options …

Figure 33: Setting Options in DBS

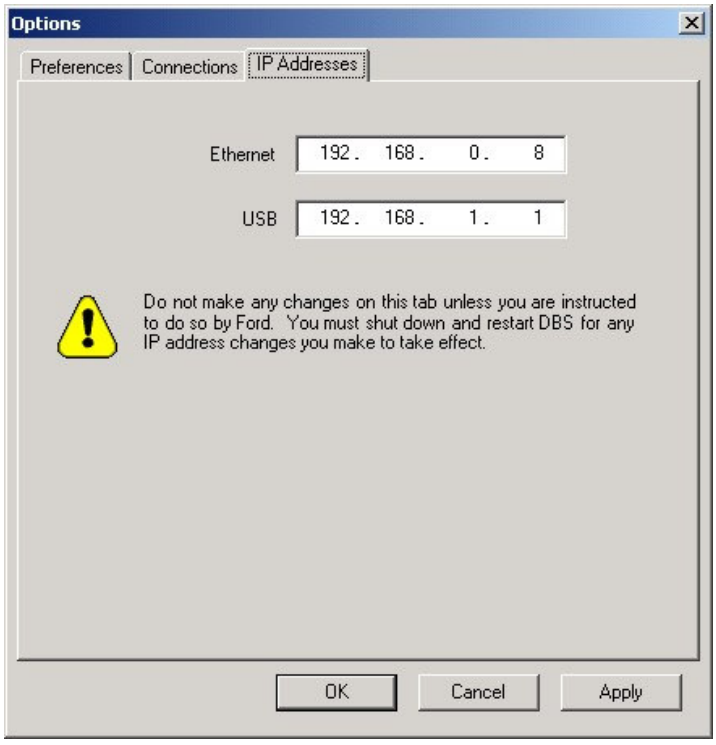

Options
Preferences
Connections
IP Addresses
Ethernet
192 . 168 . 0 . 8
USB
192 . 168 . 1 . 1
Do not make any changes on this tab unless you are instructed to do so by Ford. You must shut down and restart DBS for any IP address changes you make to take effect.
OK
Cancel
Apply

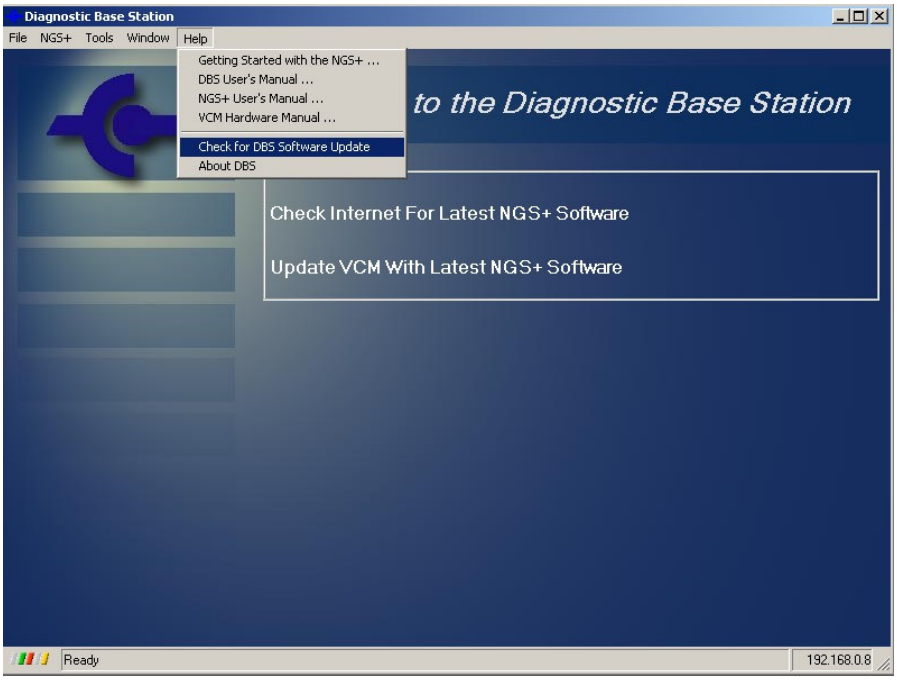
Figure 34: Display IP Addresses

DO NOT make any changes to the information displayed under this tab.

Chapter 6

Checking for DBS Updates Using the Internet

Updates of the DBS software will be available from the Internet. Check for DBS software updates by selecting **Help** and **Check for DBS Software Update** from the menu bar.


Diagnostic Base Station
File NGS+ Tools Window Help
Getting Started with the NGS+ ...
DBS User's Manual ...
NGS+ User's Manual ...
VCM Hardware Manual ...
Check for DBS Software Update
About DBS
to the Diagnostic Base Station
Check Internet For Latest NGS+ Software
Update VCM With Latest NGS+ Software
Ready
192.168.0.8

Select
Help

Check for DBS Software Update

Make sure your PC is connected to the Internet.

Figure 35: Check for DBS Software Update

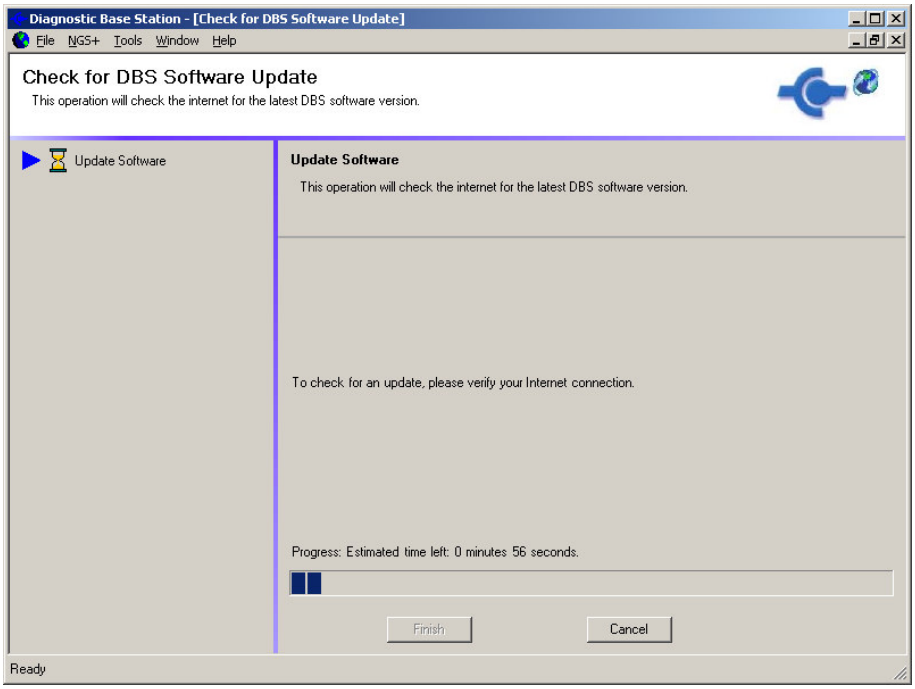

Diagnostic Base Station - [Check for DBS Software Update]
File NGS+ Tools Window Help
Check for DBS Software Update
This operation will check the internet for the latest DBS software version.
Update Software
Update Software
This operation will check the internet for the latest DBS software version.
To check for an update, please verify your Internet connection.
Progress: Estimated time left: 0 minutes 56 seconds.
Finish
Cancel
Ready

Figure 36: Check for DBS Software Update - Update Software Screen

The DBS software will indicate whether or not a DBS software update is available from the Internet.

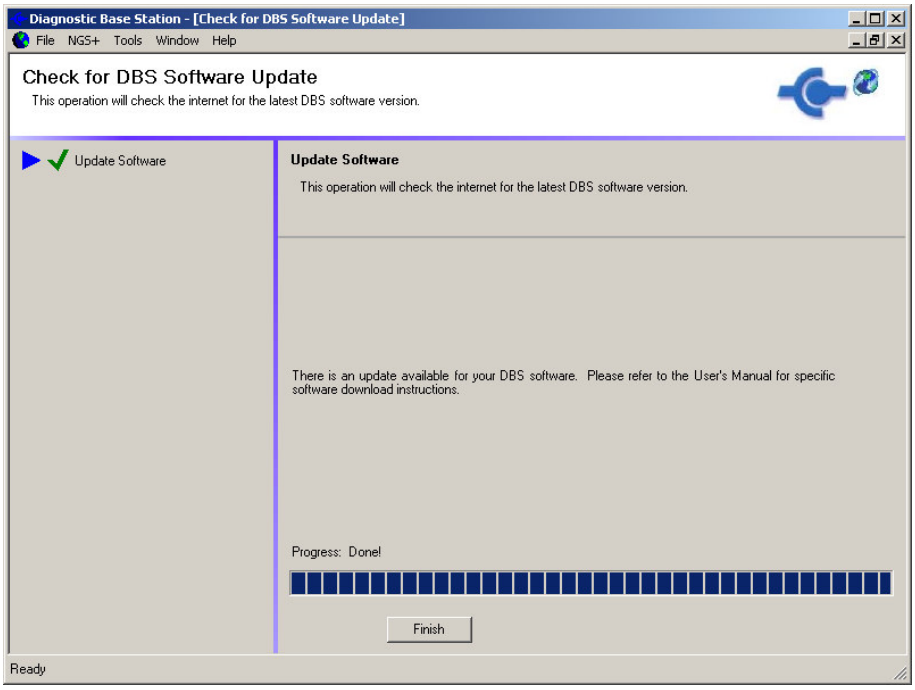

Diagnostic Base Station - [Check for DBS Software Update]
File NGS+ Tools Window Help
Check for DBS Software Update
This operation will check the internet for the latest DBS software version.
Update Software
Update Software
This operation will check the internet for the latest DBS software version.
There is an update available for your DBS software. Please refer to the User's Manual for specific software download instructions.
Progress: Done!
Finish
Ready

Figure 37: Check for DBS Software Update - Update Software Completion Screen

Select **Finish** when Update Software is complete.

Chapter 7

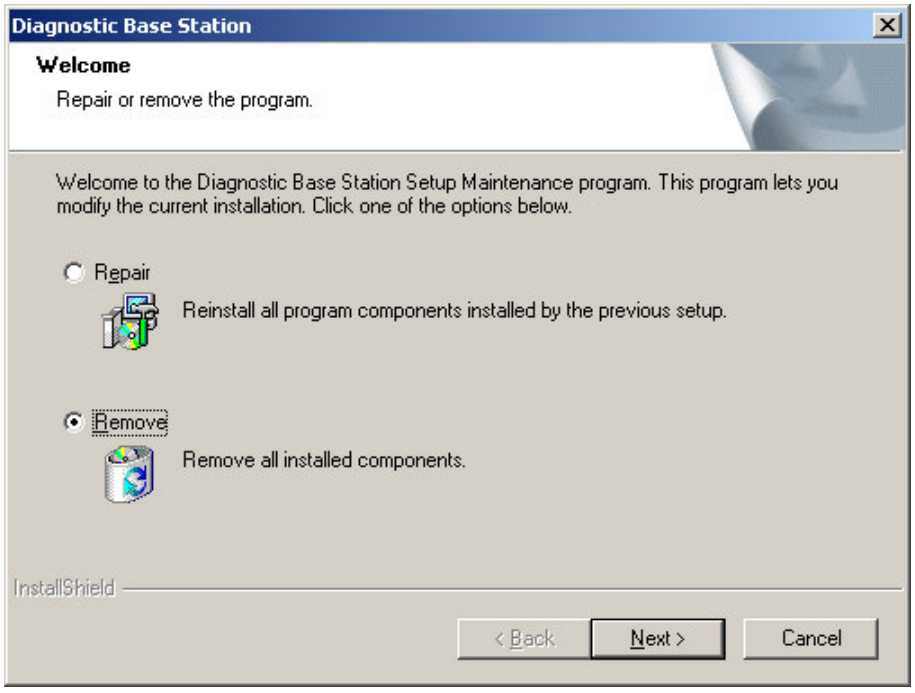
Installing DBS Software Updates

NOTE: To install a new version of DBS software you must first uninstall any previous versions of DBS software on your personal computer.

Uninstalling the DBS Software

Begin by selecting **Start** (from the lower left hand corner of your screen). Select **Settings**, **Control Panel,** and finally double click on **Add/Remove Programs**.

Highlight **Diagnostic Base Station** then click on **Change/Remove**.


Diagnostic Base Station
Welcome
Repair or remove the program.
Welcome to the Diagnostic Base Station Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.
Repair
Reinstall all program components installed by the previous setup.
Remove
Remove all installed components.
InstallShield
< Back
Next >
Cancel

Select **Remove**.

Select **Next**.

Figure 38: Diagnostic Base Station - Repair/Remove Screen

Diagnostic Base Station - InstallShield Wizard
Do you want to completely remove the selected application and all of its components?
Yes
No

Figure 39: Diagnostic Base Station - Remove Application Confirmation Screen

Select **Yes** to remove the Diagnostic Base Station software from your computer.

Several screens will flash by before returning to the Add/Remove Programs screen. Diagnostic Base Station should no longer appear in the list. The Diagnostic Base Station icon will also be removed from the desktop.

Installing DBS Software from the Internet

U.S. Ford dealerships can go to www.fmcdealer.com to download the latest version of DBS software. Follow the instructions on the website for installing the DBS software.

Canadian Ford dealerships can go to www.inford.com to download the latest version of DBS software. Follow the instructions on the website for installing the DBS software.

Non-Ford dealerships can go to www.motorcraftservice.com to download the latest version of DBS software. Follow the instructions on the website for installing the DBS software.

Installing DBS Software from a CD

Begin the DBS software installation by inserting the **VCM CD** into the CD-ROM drive on your PC. The DBS installation program should automatically start up. If the installation program does not start up automatically, click on **My Computer**, select the **CD-ROM drive with the VCM CD** and click on **setup.exe**.

The directions on the screens will guide you through the installation.

Chapter 8

DBS Troubleshooting

After performing the appropriate corrective action(s) listed below, please shut down and restart DBS prior to attempting another VCM update.

Problem Symptoms	Corrective Actions
• **VCM Update failed** • **Error 41 occurred** • **Error 89 occurred** • **Error 90 occurred** • **Error 91 occurred** • **Error 92 occurred** • **NGS+ does not boot** • **VCM lights 2 and 4 are on** • **DBS progress bar counting down to 0 minutes**	• Temporarily turn off any firewall software on the DBS PC and try updating the VCM again. Below is a partial list of common firewall software that might be installed on the DBS PC: ➢ Windows XP Built-in Firewall ➢ Zone Alarm ➢ BlackICE ➢ McAfee Personal Firewall Plus ➢ Norton Personal Firewall ➢ Armor2net ➢ eTrust ➢ Outpost ➢ PC-cillin
• **VCM Updated failed** • **Error 41 may have occurred** • **NGS+ T-handle still boots** • **Error 23 may have occurred** • **Error 89 may have occurred** • **Error 90 may have occurred**	• Temporarily turn off any firewall software on the DBS PC (see above list of common firewall software). • **If connecting via Ethernet:** Many PCs have Windows network connections set up that do not correspond to physical network hardware (i.e. real network cards, like D-Link and 3COM cards.) Disable any Windows network connections that are not associated with

• **Error 91 may have occurred** • **Error 92 may have occurred** • **DBS progress bar counting down to 0 minutes**	a real network card. • **If connecting via Ethernet:** If your PC has more than one network card, temporarily disable the Windows network connections for all network cards except for the network card being used by DBS. • **If connecting via Ethernet:** Erase Default Gateway and DNS Server IP Addresses for the Windows network connection being used by DBS. Make sure to restore these IP addresses to their original values when the VCM update process is complete. • **If connecting via USB:** The VCM must have NGS+ software version V24.1 or later on it before it can be connected to the DBS PC via USB. Download V24.1or later to the VCM using Ethernet. The VCM can be updated via USB the next time. • **If connecting via USB:** There may be a Windows Ethernet network connection that is configured for VCM Ethernet communication. Disable this Ethernet network connection or change its IP address and then see Appendix B to make sure that the DBS PC is configured for USB communication. • Make sure that you do not power up the VCM until you have selected "Update NGS+ Software" and you see the blue progress bar start to move. • Make sure that DBS is installed on drive C. DBS may not function properly if installed on a drive other than C. • Check your VCM network and power cables to make sure they did not come loose during the VCM update attempt. • When updating multiple VCMs, please make sure that you shut down and restart DBS in between each VCM update.
• **VCM Update failed**	• **If connecting via Ethernet:** Make sure that you have made the needed LAN adjustments detailed in the **Update**

• **Error 5 occurred**	**Ethernet LAN Configuration for Windows 98** section or the **Update Ethernet LAN Configuration for Windows 2000 Professional or Windows XP** section in the **DBS User's Manual**. • Make sure that the VCM/Caddy assembly is connected to the VCM Power Supply Unit and the VCM/Caddy assembly is connected to the DBS PC. The light on the PC's network port should be on. • **If connecting via USB:** The VCM must have NGS+ software version V24.1 or later on it before it can be connected to the DBS PC via USB. Download V24.1 or later to the VCM using Ethernet. • **If connecting via USB:** The Windows network connection associated with the USB connection must be configured one time only with an IP address of 192.168.1.1 and a subnet mask of 255.255.255.0 before a VCM can connect to DBS via USB. See Appendix B for instructions on how to configure the DBS PC for USB communication.
• **DBS can't communicate with the Internet to check for NGS+ updates.**	• The IP address and/or proxy may not be configured correctly • Make sure that you have restored the IP address and subnet mask settings to the values that were present before you connected the VCM to the DBS PC.
• **Cannot start DBS application.**	• You may need computer Administrator access for Windows XP and Windows 2000.
• **Can't change the Windows network connection IP address and subnet.**	• You many not have administrator privileges and need to ask your administrator to change the IP address for you.
• **The DBS PC can't communicate with the LAN in the dealership.**	• Make sure that you have restored the IP address and subnet mask settings to the values that were present before you connected the VCM to the DBS PC.

Note: Additional troubleshooting tips for the VCM are available in the VCM Hardware Manual.

Chapter 9

Support Instructions

If the checks in the Troubleshooting section did not resolve your NGS+ concern, contact the Ford Technical Information Support for assistance.

For U.S. Ford Dealership support information see www.fmcdealer.com

For Canadian Ford Dealership support information see www.inford.com

For non-Ford Dealerships support information is available at www.motorcraftservice.com

Please have the following information available:

- Vehicle Make, Model, Year, and Engine Size
- PCM part number or Tear Tag number
- NGS+ Software Level found under New Generation Setup/Software Version
- Thincard software level, displayed on the screen after the card is inserted
- DBS Software Version and Build found under Help/About DBS

Appendix A

Checking the Version of NGS+ Software on the VCM

Checking the Version of NGS+ Software on the VCM

Place the VCM in the T-Handle and power up the VCM.

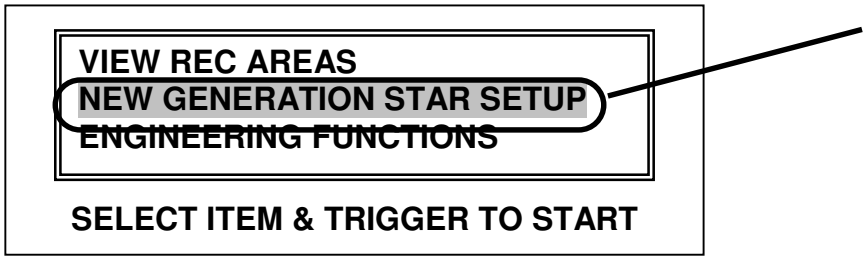


Figure 40: Select New Generation Star Setup

1 Use the thumbwheel to scroll down to **New Generation Star Setup**

2 Select **Trigger**

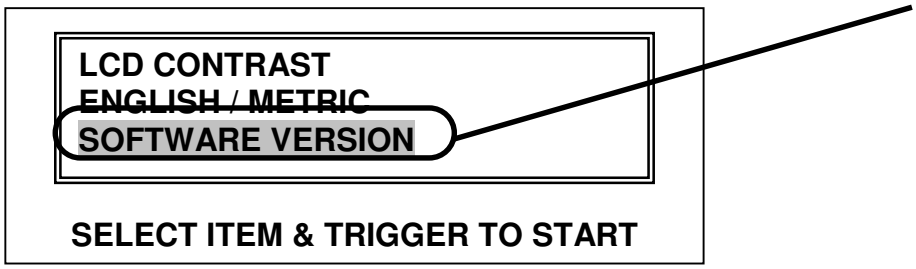


Figure 41: Select Software Version

1 Use the thumbwheel to scroll down to **Software Version**

2 Select **Trigger**

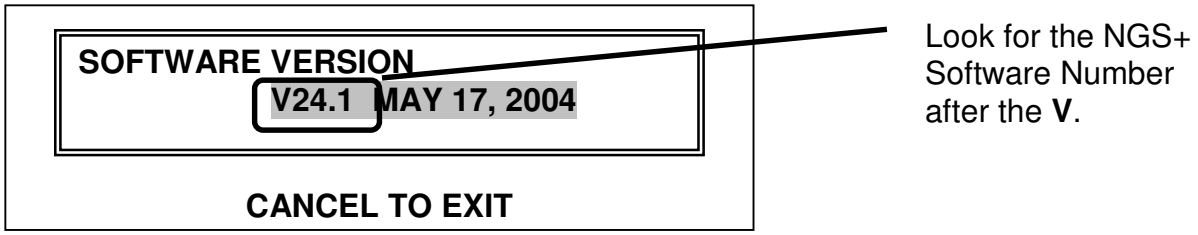


Figure 42: Check NGS+ Version Number

Appendix B

Configuring the DBS PC and VCM to Use USB

Configuring the DBS PC and VCM for USB

Before you can use your USB cable to perform VCM updates using DBS, you must configure the DBS PC and the VCM for USB. **This configuration step needs to be done only once.** To prepare DBS and your VCM for USB communication, please follow the directions in this section, according to the Windows operating system that you have on your PC.

IMPORTANT: These steps assume that you have already installed DBS V32.0.

Configuring the DBS PC and VCM for USB (continued)

Follow the flowchart below to configure the DBS PC and VCM for USB.

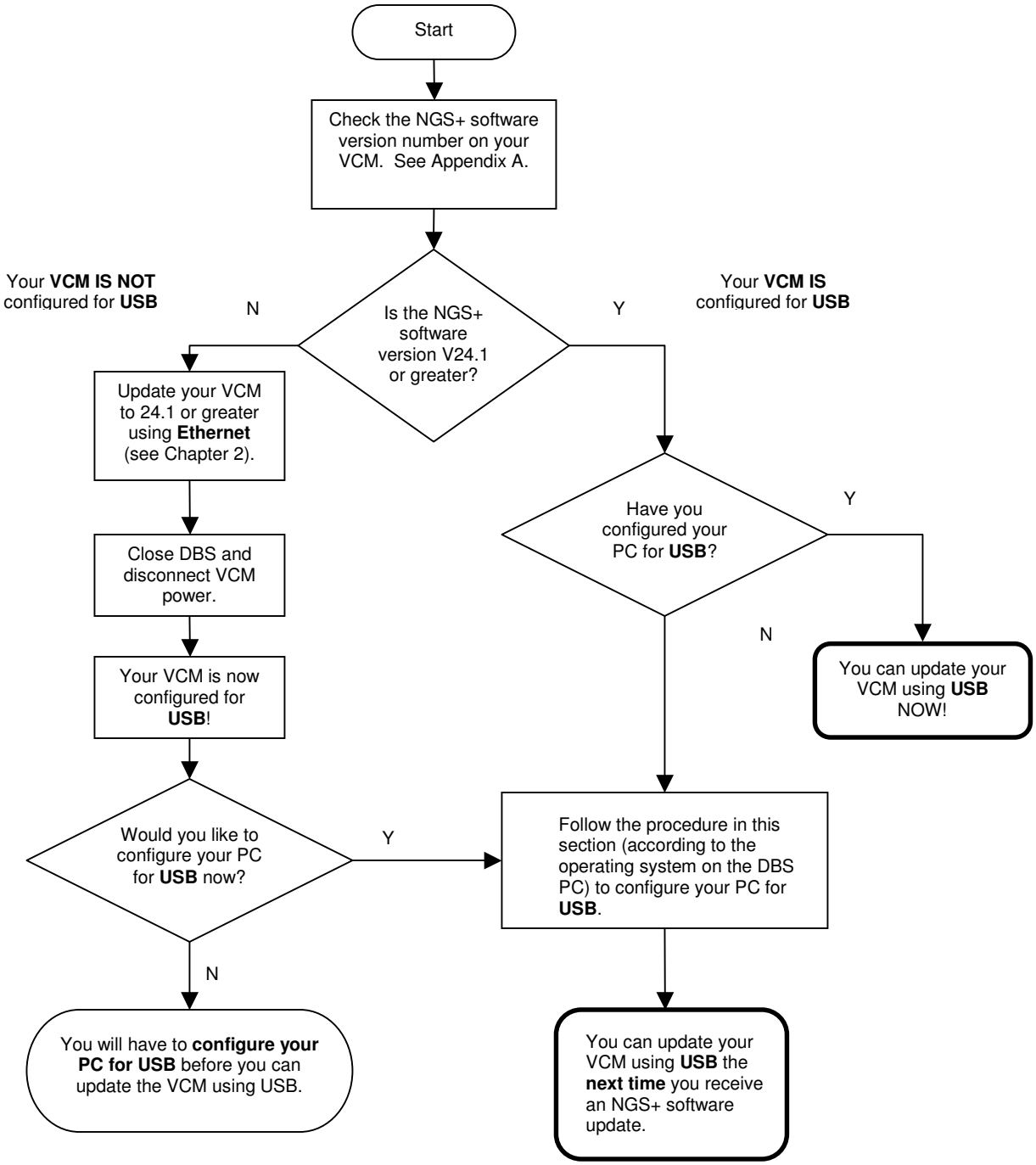

Start
Check the NGS+ software version number on your VCM. See Appendix A.
Is the NGS+ software version V24.1 or greater?
Your VCM IS NOT configured for USB
N
Y
Your VCM IS configured for USB
Update your VCM to 24.1 or greater using Ethernet (see Chapter 2).
Close DBS and disconnect VCM power.
Your VCM is now configured for USB!
Would you like to configure your PC for USB now?
Y
N
You will have to configure your PC for USB before you can update the VCM using USB.
Have you configured your PC for USB?
Y
N
You can update your VCM using USB NOW!
Follow the procedure in this section (according to the operating system on the DBS PC) to configure your PC for USB.
You can update your VCM using USB the next time you receive an NGS+ software update.

Figure 43: Updating the VCM Using the DBS PC and USB

Install USB Drivers for Windows 98

- Close the DBS application.
- Connect your VCM to your PC using your **USB** cable.
- Power up the VCM by connecting the VCM's power cable to the VCM. After the VCM boots up, you will see a window similar to the following.
- Depending on how Windows 98 was installed, the Windows 98 disk may be required during this procedure.

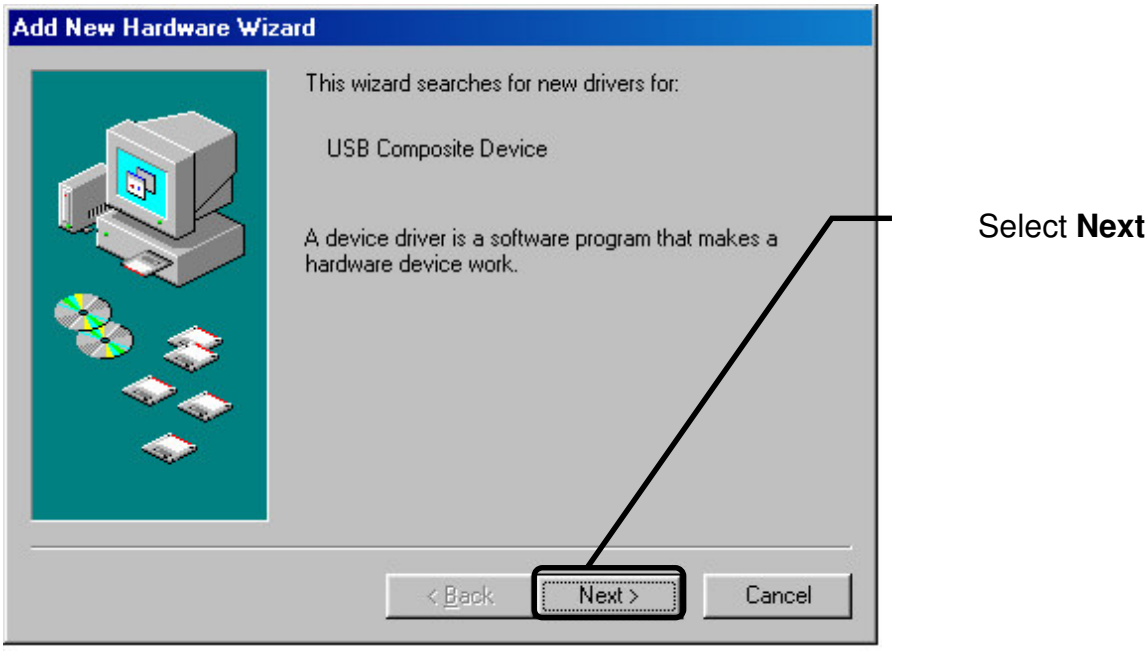
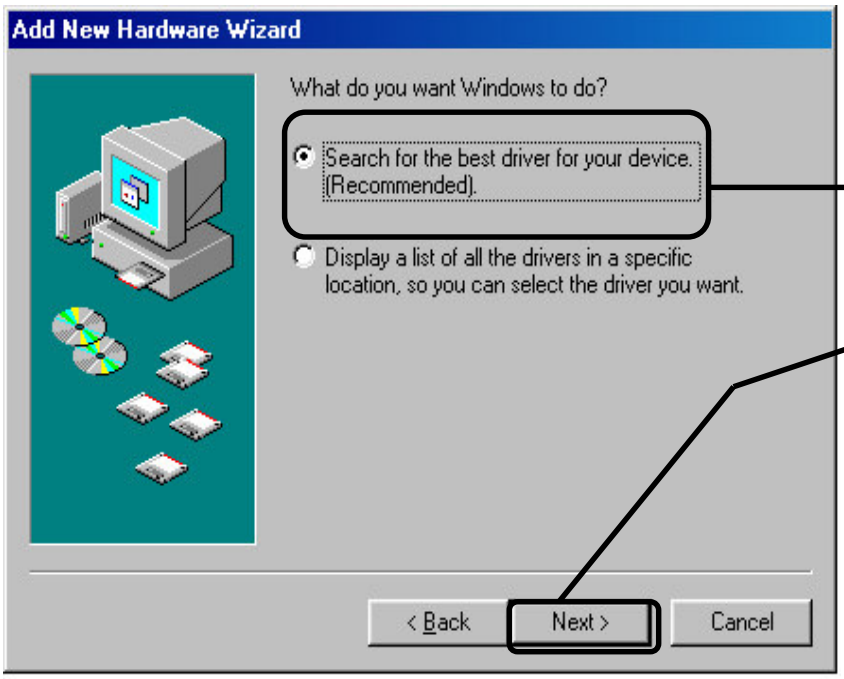

Add New Hardware Wizard
This wizard searches for new drivers for:
USB Composite Device
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel
Select **Next**

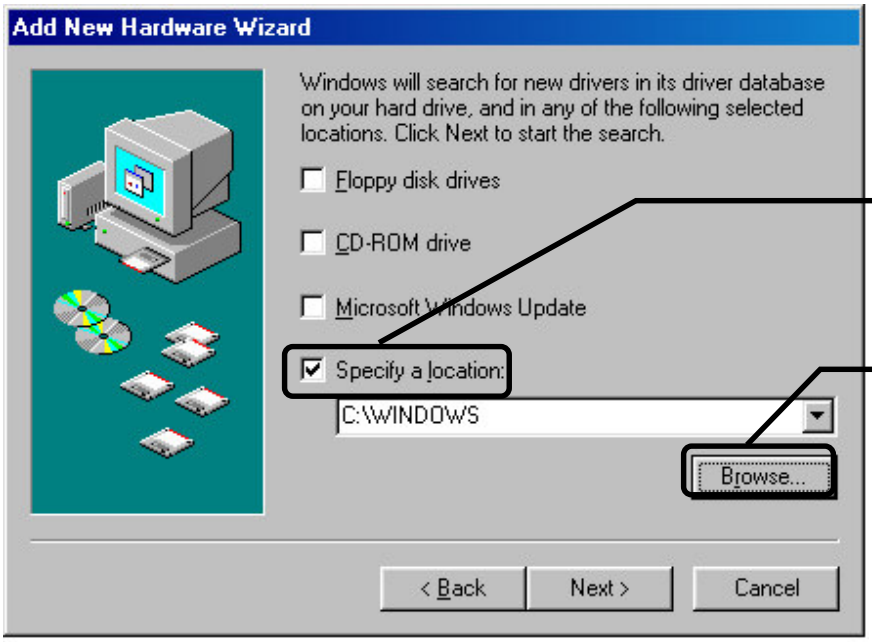
Figure 44: Add New Hardware Wizard Initial Screen


Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended).
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel

1 Select **Search for the best driver for your device**.

2 Click **Next.**

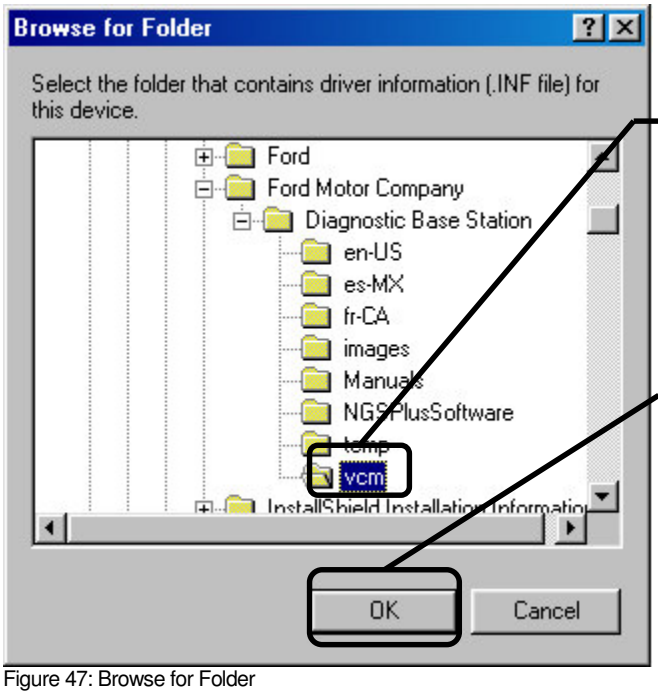
Figure 45: Add New Hardware Wizard – Search for Driver


Add New Hardware Wizard
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
Floppy disk drives
CD-ROM drive
Microsoft Windows Update
Specify a location:
C:\WINDOWS
Browse...
< Back
Next >
Cancel

1 **Check Specify a Location**

2 Click **Browse**

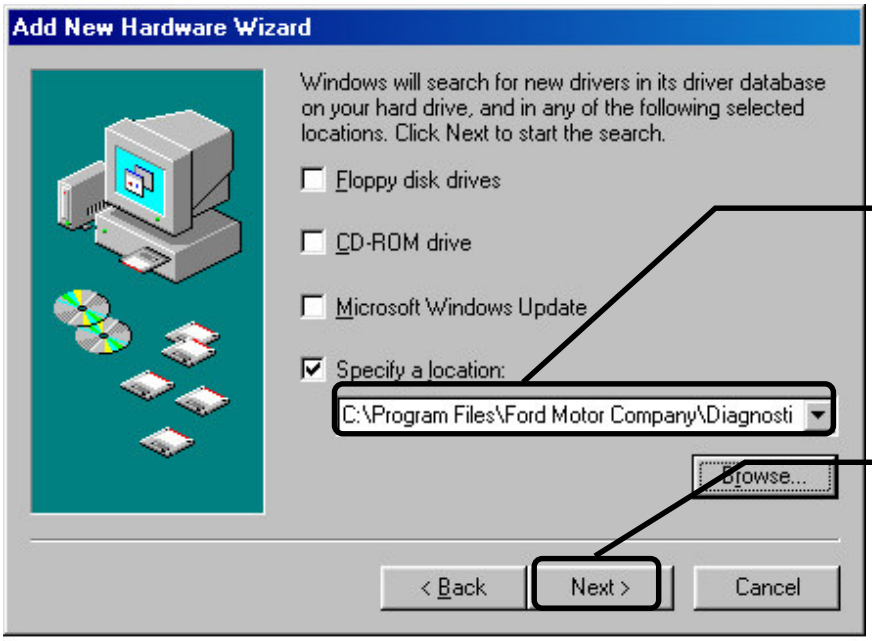
Figure 46: Add New Hardware Wizard – Browse for Location



1 Highlight the **c:\Program Files\Ford Motor Company\Diagnostic Base Station\vcm** folder

2 Select **OK**.

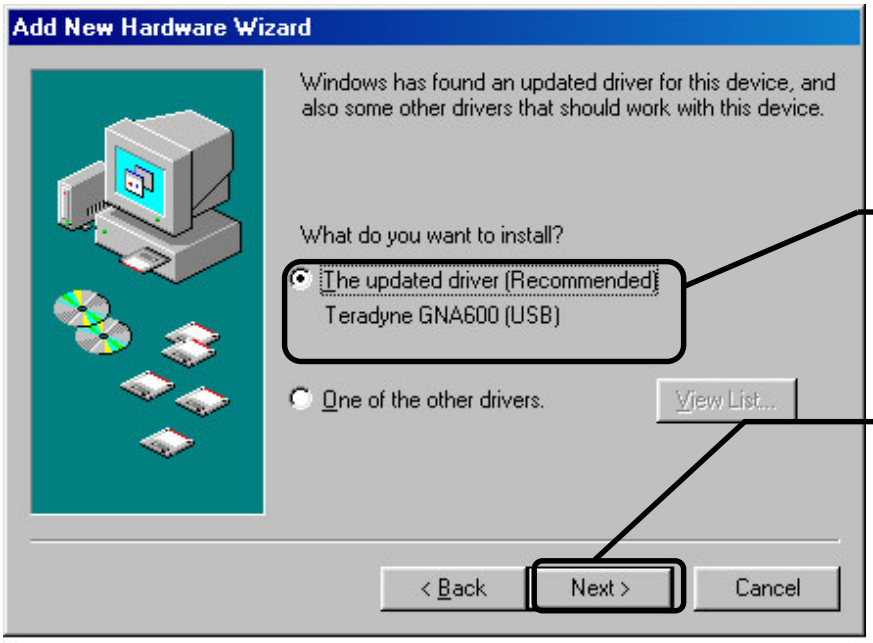
Figure 47: Browse for Folder


Add New Hardware Wizard
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
Floppy disk drives
CD-ROM drive
Microsoft Windows Update
Specify a location:
C:\Program Files\Ford Motor Company\Diagnosti
Browse...
< Back
Next >
Cancel

1 The location you selected will be displayed

2 Select **Next**.

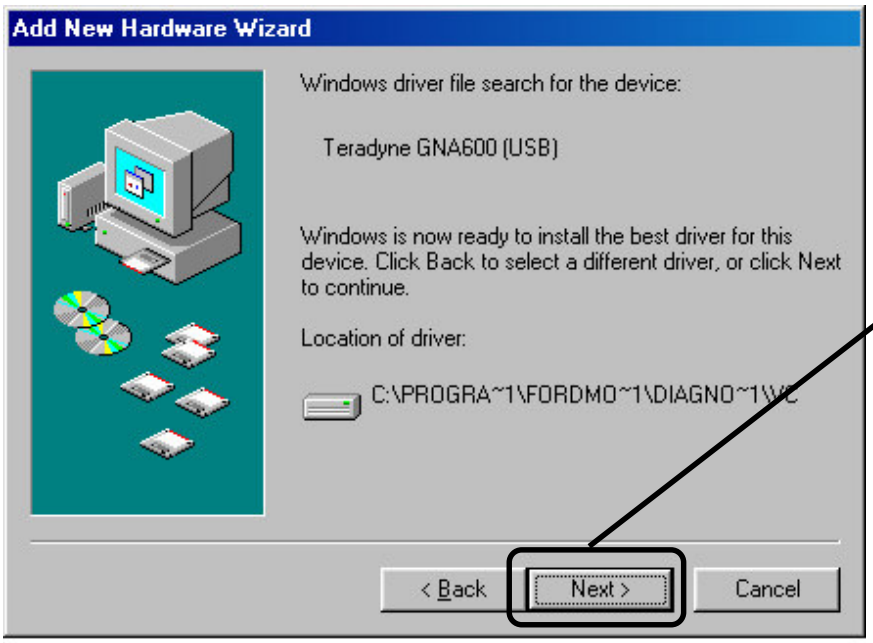
Figure 48: Add New Hardware Wizard - Specify Location


Add New Hardware Wizard
Windows has found an updated driver for this device, and also some other drivers that should work with this device.
What do you want to install?
The updated driver (Recommended)
Teradyne GNA600 (USB)
One of the other drivers.
View List...
< Back
Next >
Cancel

1 Select **The updated driver (Recommended)**

2 Select **Next**.

Figure 49: Add New Hardware Wizard - Updated Driver Selection


Add New Hardware Wizard
Windows driver file search for the device:
Teradyne GNA600 (USB)
Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
Location of driver:
C:\PROGRA~1\FORDMO~1\DIAGNO~1\VC
< Back
Next >
Cancel

Select **Next**.

Figure 50: Add New Hardware Wizard – Located Driver

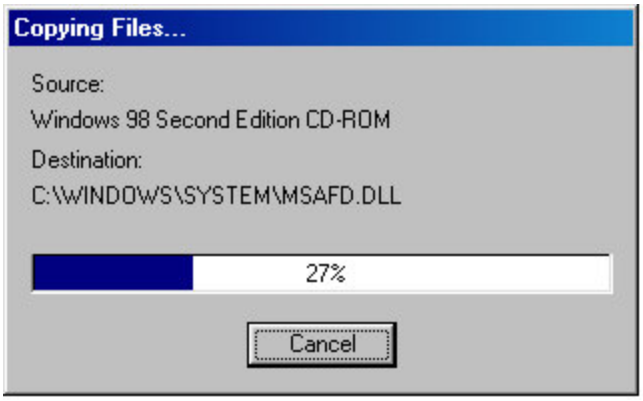


Figure 51: Coping Files Progress Screen

A progress bar will show the USB driver being copied to your PC.

You may be asked to insert your Windows 98 disk at this time.

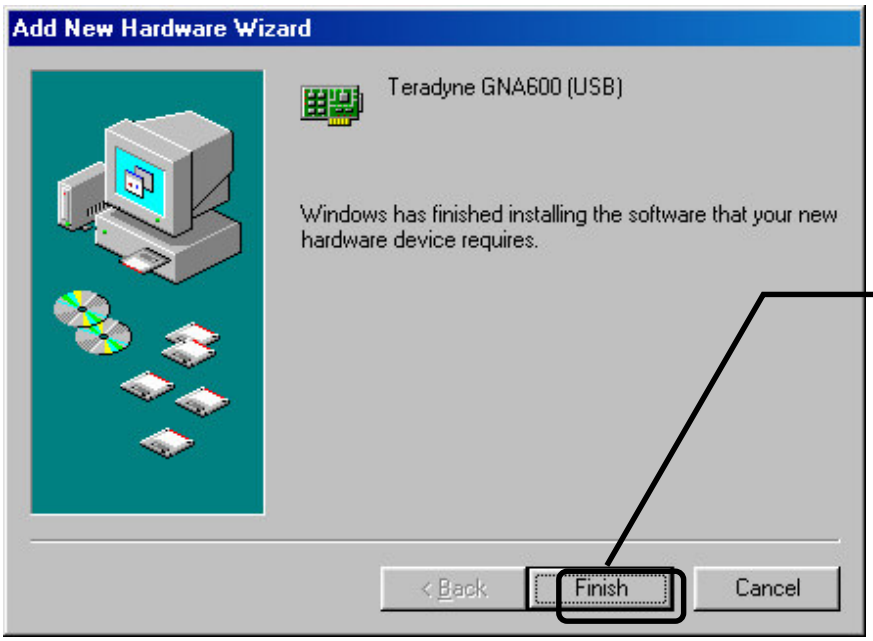


Figure 52: Add New Hardware Wizard Completion Screen

Select **Finish.**

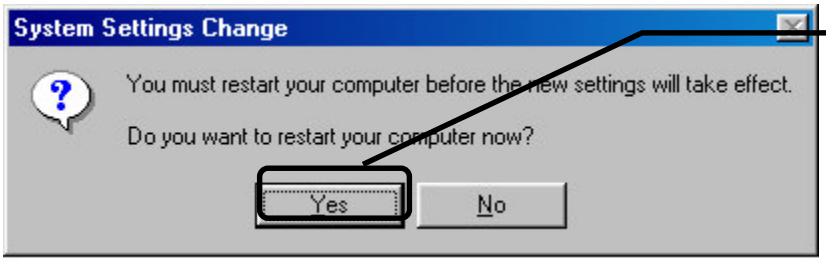

System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

Figure 53: Restart Your Computer Message

Select **Yes**.

IMPORTANT:

Please leave your VCM powered up during the restart of your PC.

Configure the IP Address for USB – Windows 98

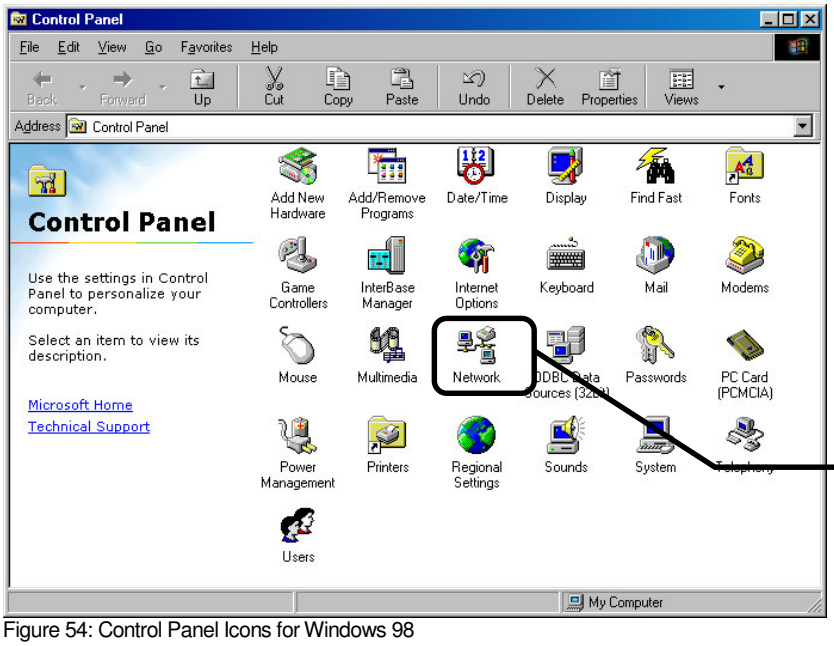


Figure 54: Control Panel Icons for Windows 98

1 Make sure your VCM is connected via USB and powered up.

2 Select: **Start Settings Control Panel.**

3 Double click on the **Network** icon.

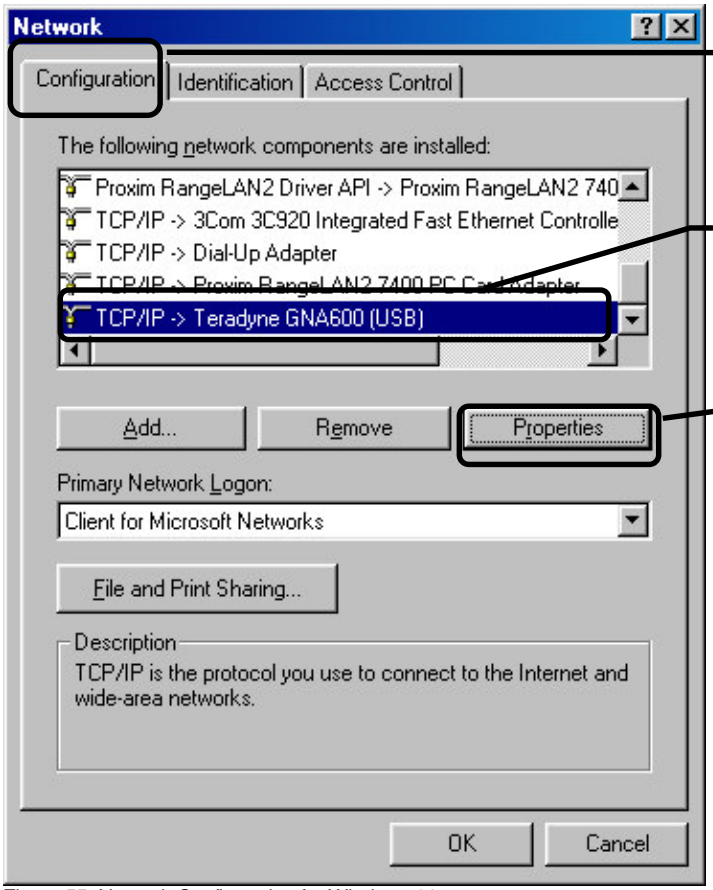


Figure 55: Network Configuration for Windows 98

1 Select the **Configuration** tab

2 Highlight **TCP/IP-> Teradyne (GNA600 (USB)**

3 Select **Properties**.

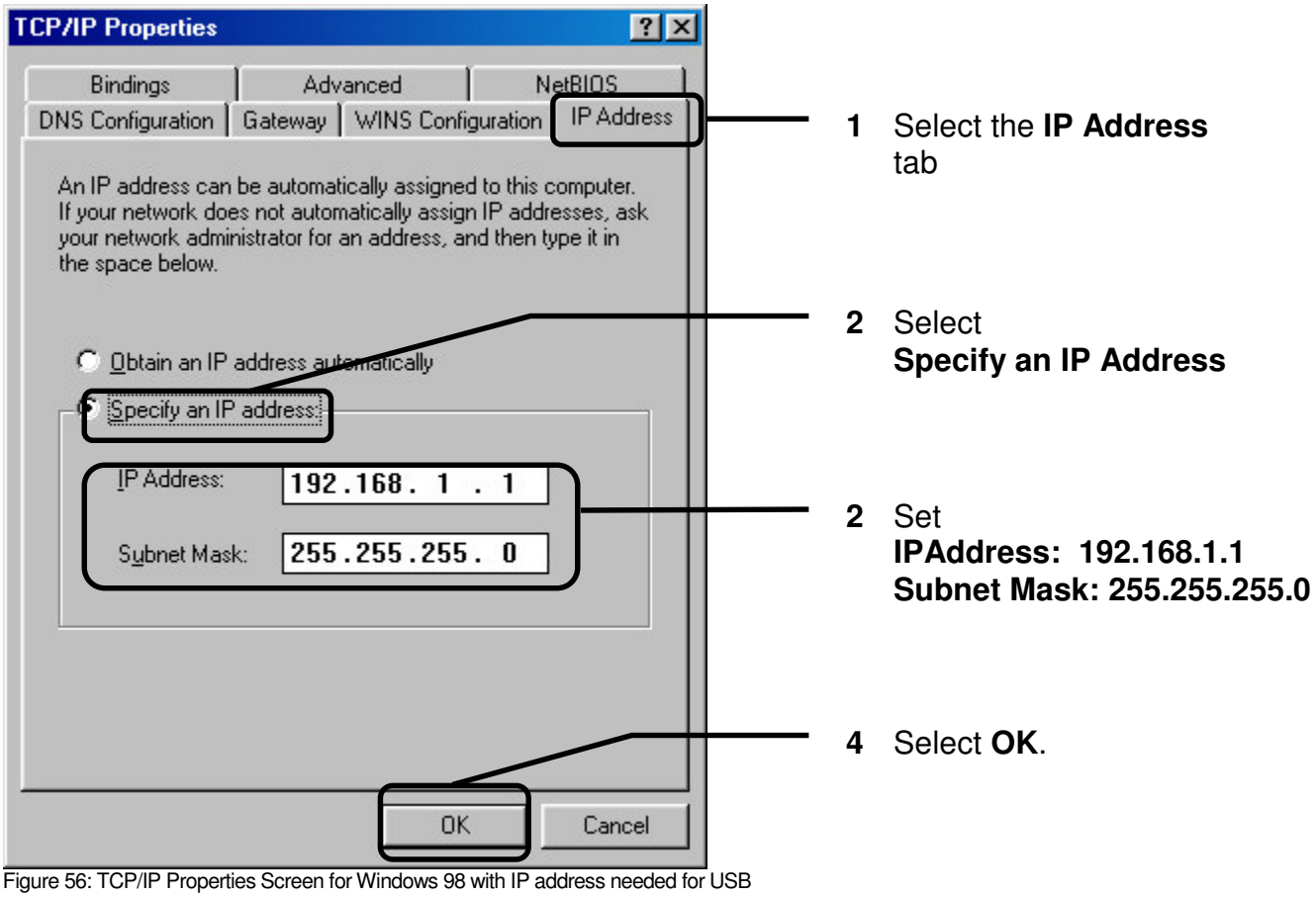

TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.
Obtain an IP address automatically
Specify an IP address:
IP Address:
192.168. 1 . 1
Subnet Mask:
255.255.255. 0
OK
Cancel
1 Select the IP Address tab
2 Select Specify an IP Address
2 Set IPAddress: 192.168.1.1 Subnet Mask: 255.255.255.0
4 Select OK.

Figure 56: TCP/IP Properties Screen for Windows 98 with IP address needed for USB

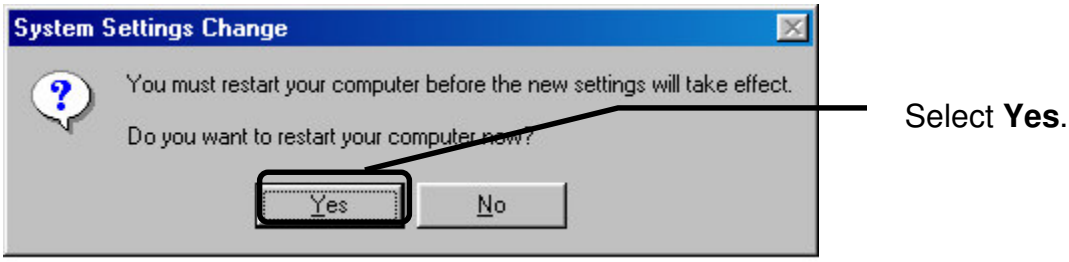

System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No
Select Yes.

Figure 57: System Settings Change - Restart Computer Screen

The DBS PC is now set up to communicate with your VCM using USB. You do not need to perform this step again unless you uninstall and reinstall DBS. To update your VCM using USB, follow the steps in Chapter 2, but use the USB cable instead of the network/Ethernet cable and DO NOT configure your DBS PC for Ethernet communication. You may continue to update your VCM using your network/Ethernet cable if you prefer.

Install USB Drivers for Windows XP

- Close the DBS application.
- Connect your VCM to your PC using your **USB** cable.
- Power up the VCM by connecting the VCM's power cable to the VCM. After the VCM boots up, you will see a window similar to the following.

Found New Hardware will appear momentarily.

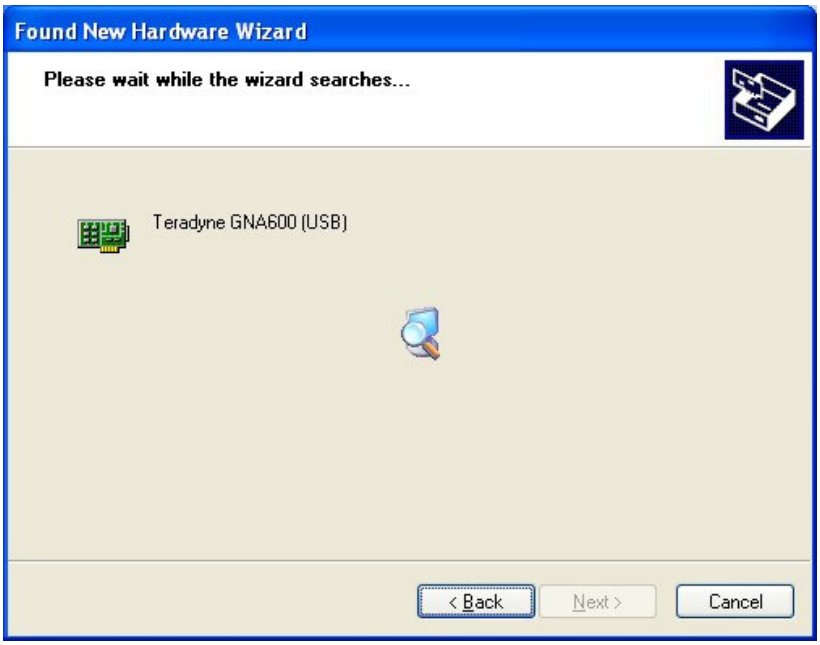
Figure 58: Found New Hardware Message

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
Teradyne GNA600 (USB)
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Click Next to continue.
< Back
Next >
Cancel

1 Select **Install the software automatically**

2 Select **Next**.

Figure 59: Found New Hardware Wizard



This screen will appear momentarily.

Figure 60: Found New Hardware Wizard Screen 2

Hardware Installation
The software you are installing for this hardware:
Teradyne GNA600 (USB)
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Select **Continue Anyway**

Figure 61: Hardware Installation screen

Figure 62: Completing Hardware Wizard

Configure the IP Address for USB – Windows XP

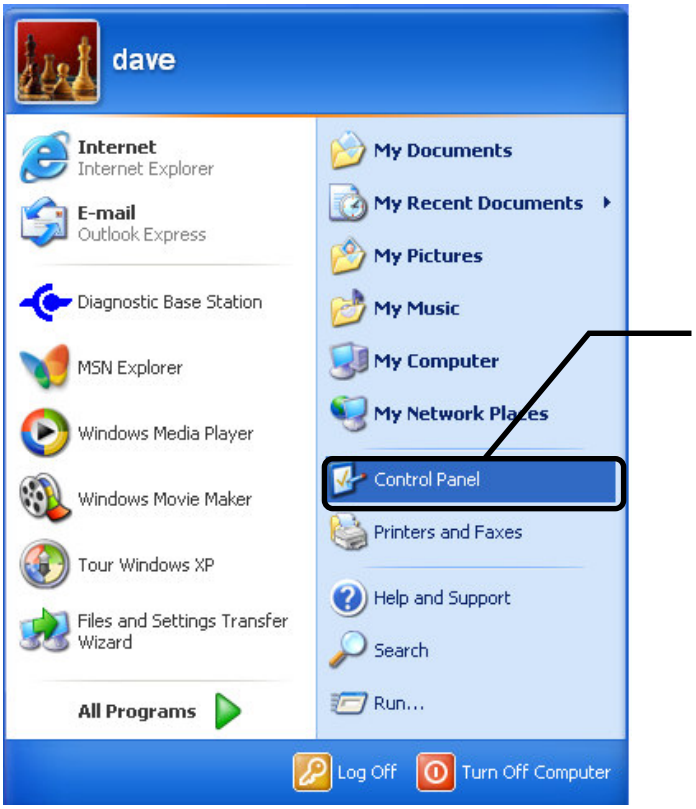


Figure 63: Windows XP Start Menu

1 Make sure your VCM is connected via USB and powered up.

2 Select
Start
Control Panel

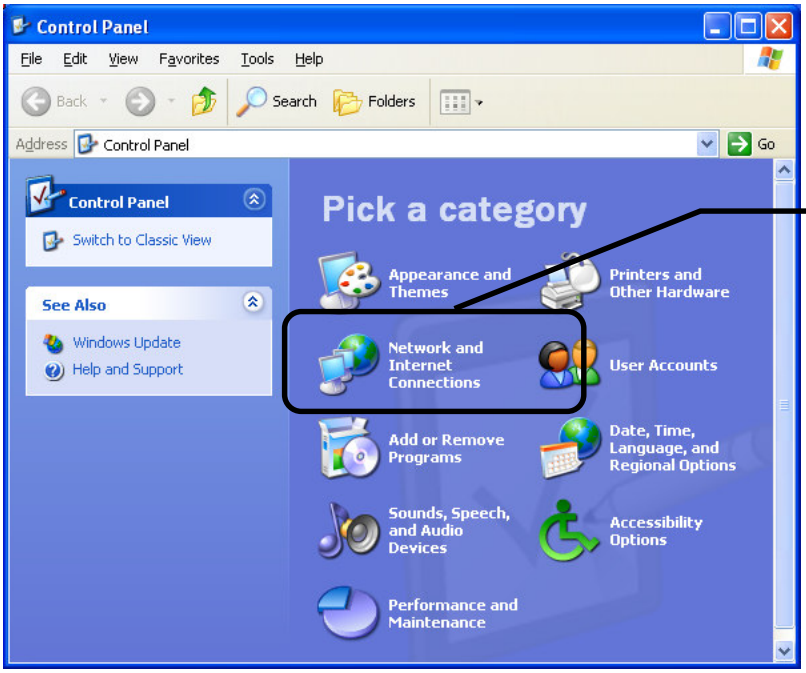


Figure 64: Select Network and Internet Connections

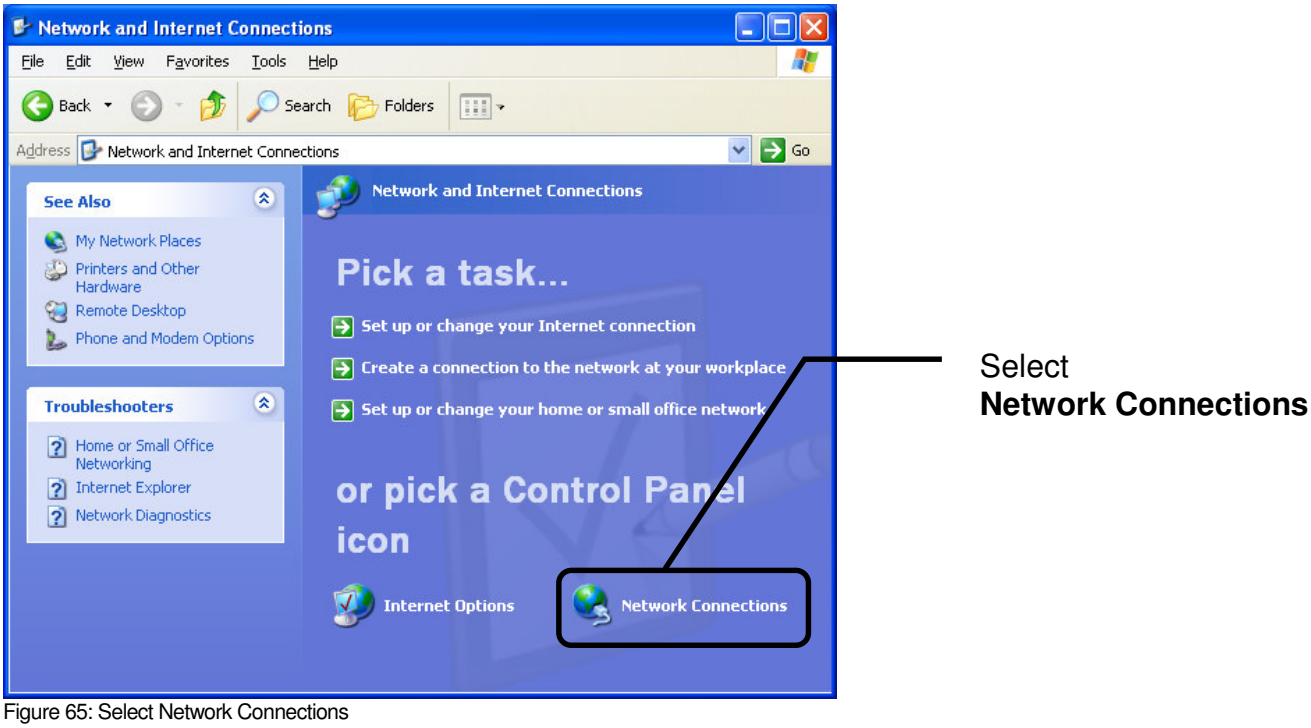


Figure 65: Select Network Connections

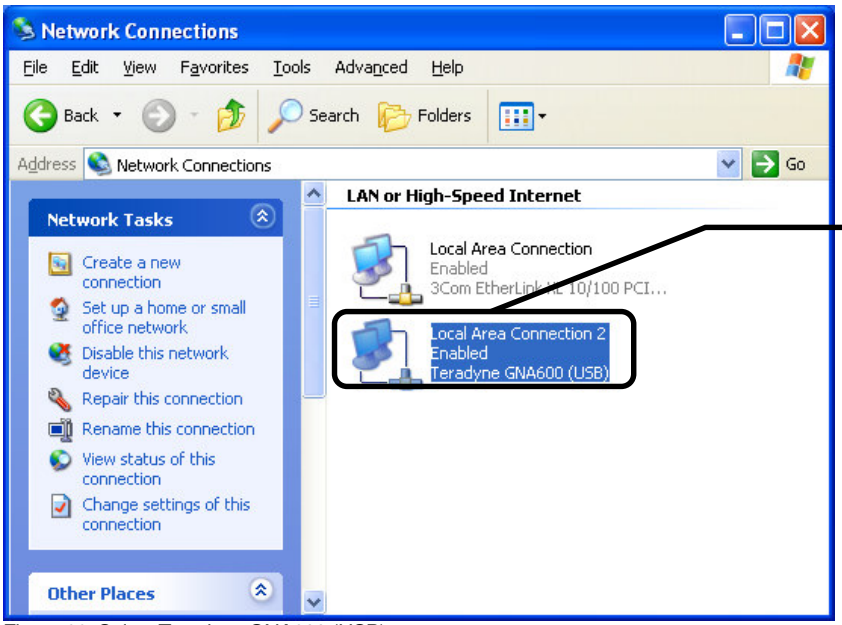


Figure 66: Select Teradyne GNA600 (USB)

IMPORTANT: The connection labeled Teradyne GNA600 (USB) will not appear until the VCM has fully booted up, which could take up to one minute.

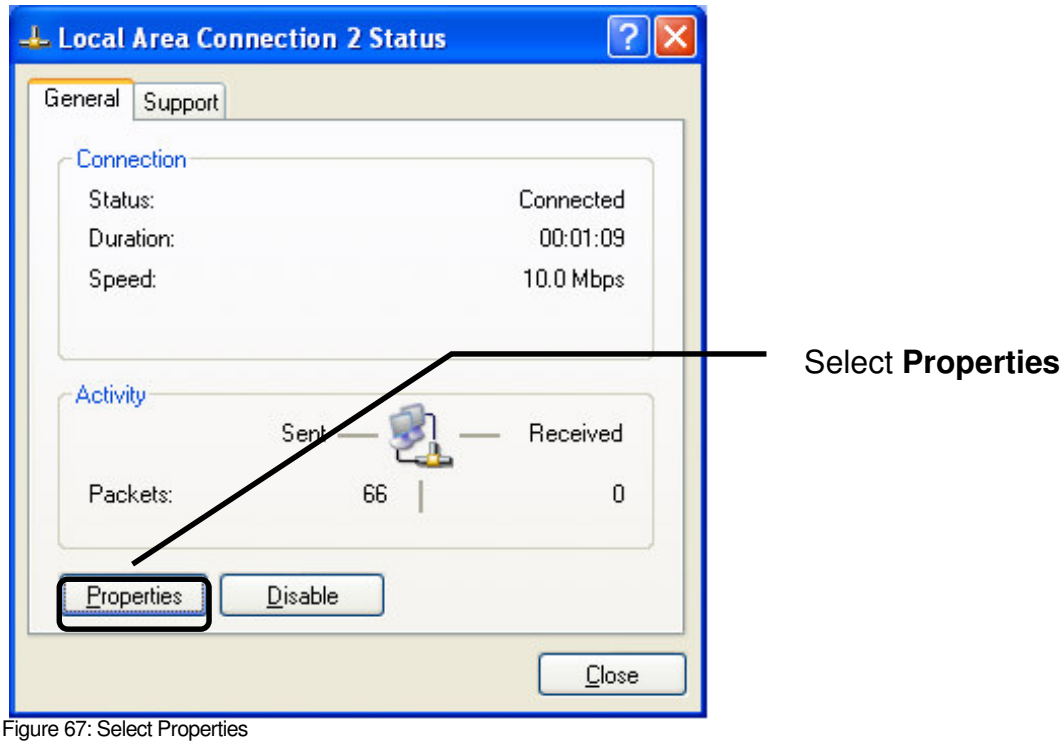


Figure 67: Select Properties

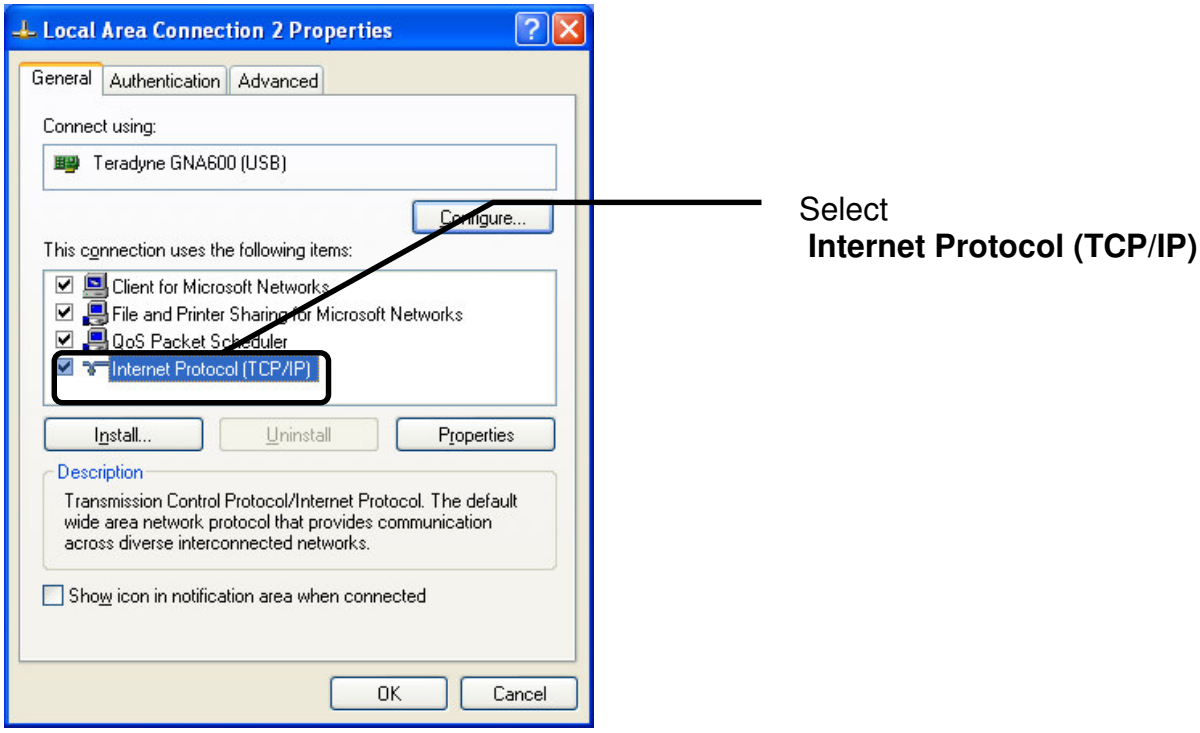


Figure 68: Select Internet Protocol (TCP/IP)

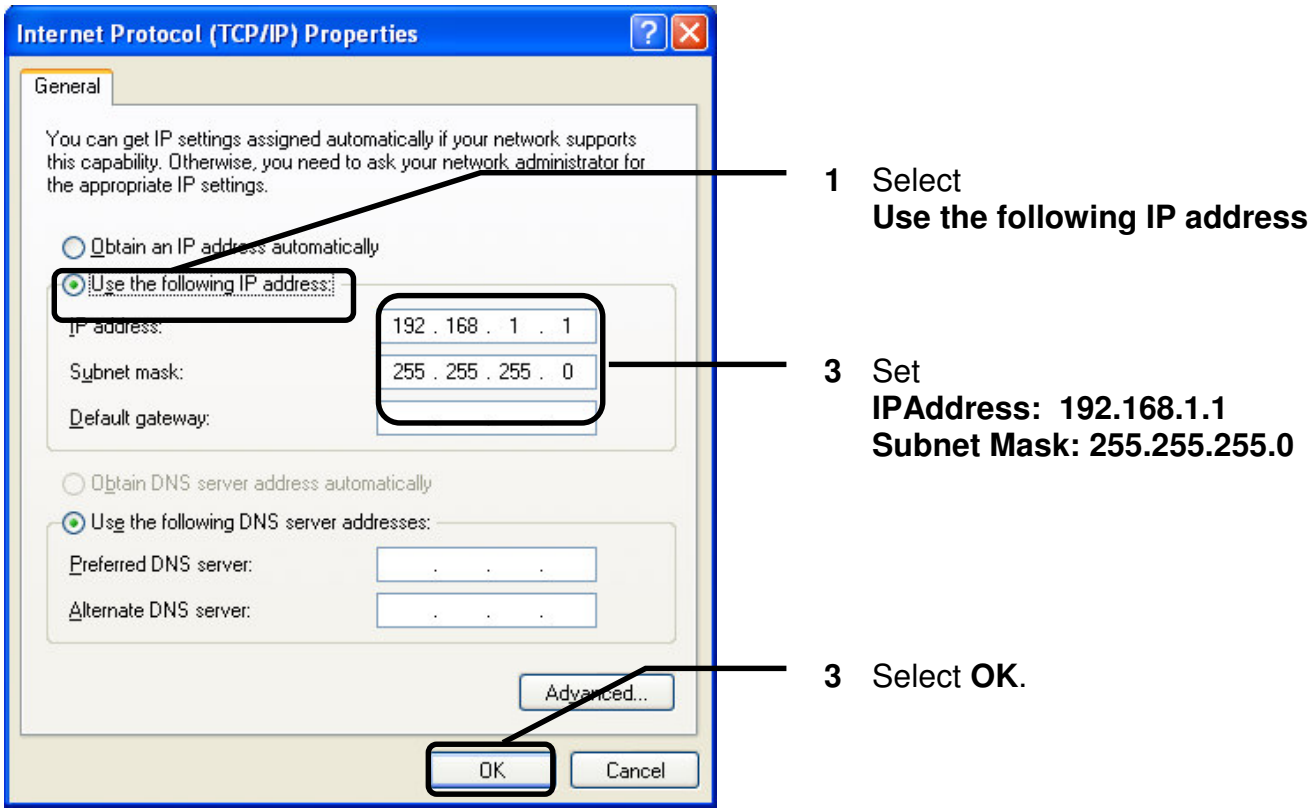

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 1 . 1
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel
1 Select
Use the following IP address
3 Set
IPAddress: 192.168.1.1
Subnet Mask: 255.255.255.0
3 Select OK.

Figure 69: Internet Protocol (TCP/IP) Properties

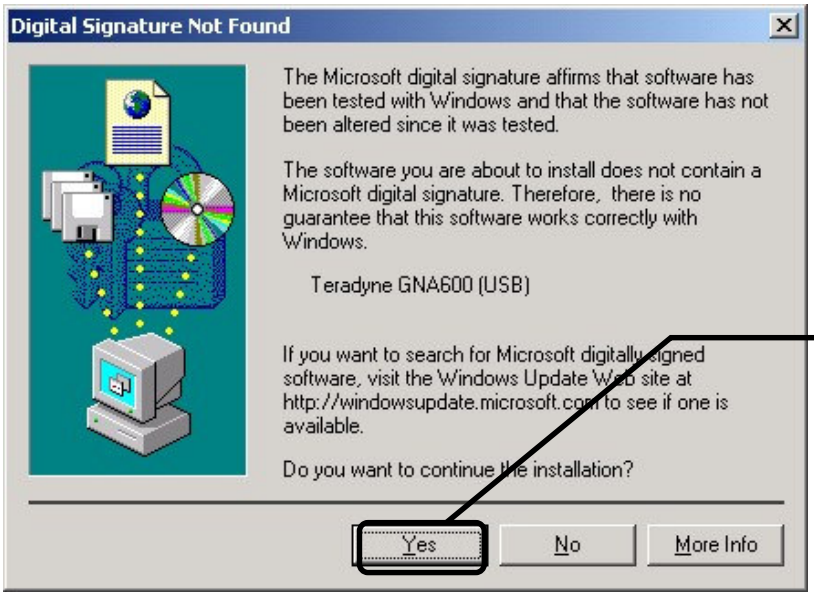
The DBS PC is now set up to communicate with your VCM using USB. You do not need to perform this step again unless you uninstall and reinstall DBS. To update your VCM using USB, follow the steps in Chapter 2, but use the USB cable instead of the network/Ethernet cable and DO NOT configure your DBS PC for Ethernet communication. You may continue to update your VCM using your network/Ethernet cable if you prefer.

Install USB Drivers for Windows 2000

- Close the DBS application.
- Connect your VCM to your PC using your **USB** cable.
- Power up the VCM by connecting the VCM's power cable to the VCM. After the VCM boots up, you will see a window similar to the following

This screen will appear momentarily.

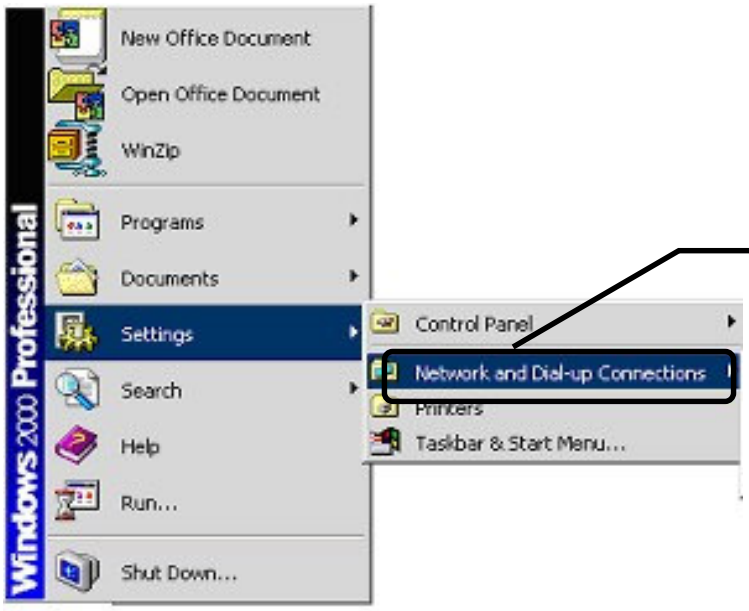
Figure 70: Found New Hardware


Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
Teradyne GNA600 (USB)
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
Do you want to continue the installation?
Yes
No
More Info

Select **Yes**.

Figure 71: Digital Signature Not Found

Configure the IP Address for USB – Windows 2000

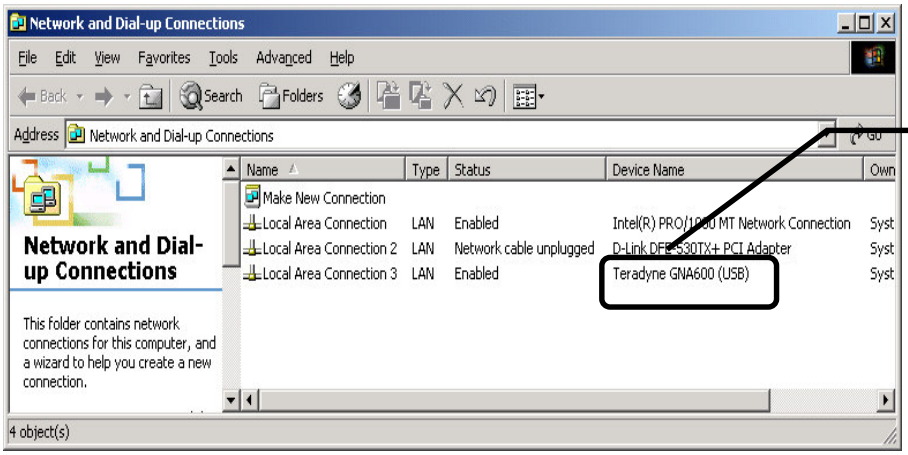


1 Make sure your VCM is connected via USB and powered up.

2 Select **Start Settings**

3 Double click on **Network and Dial Up Connections**

Figure 72: Select Network and Dial Up Connections


Network and Dial-up Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders
Address Network and Dial-up Connections
Network and Dial-up Connections
This folder contains network connections for this computer, and a wizard to help you create a new connection.
Name Type Status Device Name
Make New Connection
Local Area Connection LAN Enabled Intel(R) PRO/1000 MT Network Connection
Local Area Connection 2 LAN Network cable unplugged D-Link DFE-530TX+ PCI Adapter
Local Area Connection 3 LAN Enabled Teradyne GNA600 (USB)
4 object(s)

Double click on the connection labeled **Teradyne GNA600 (USB)**

Figure 73: Select Teradyne GNA600 (USB)

IMPORTANT: The connection labeled Teradyne GNA600 (USB) will not appear until the VCM has fully booted up, which could take up to one minute.

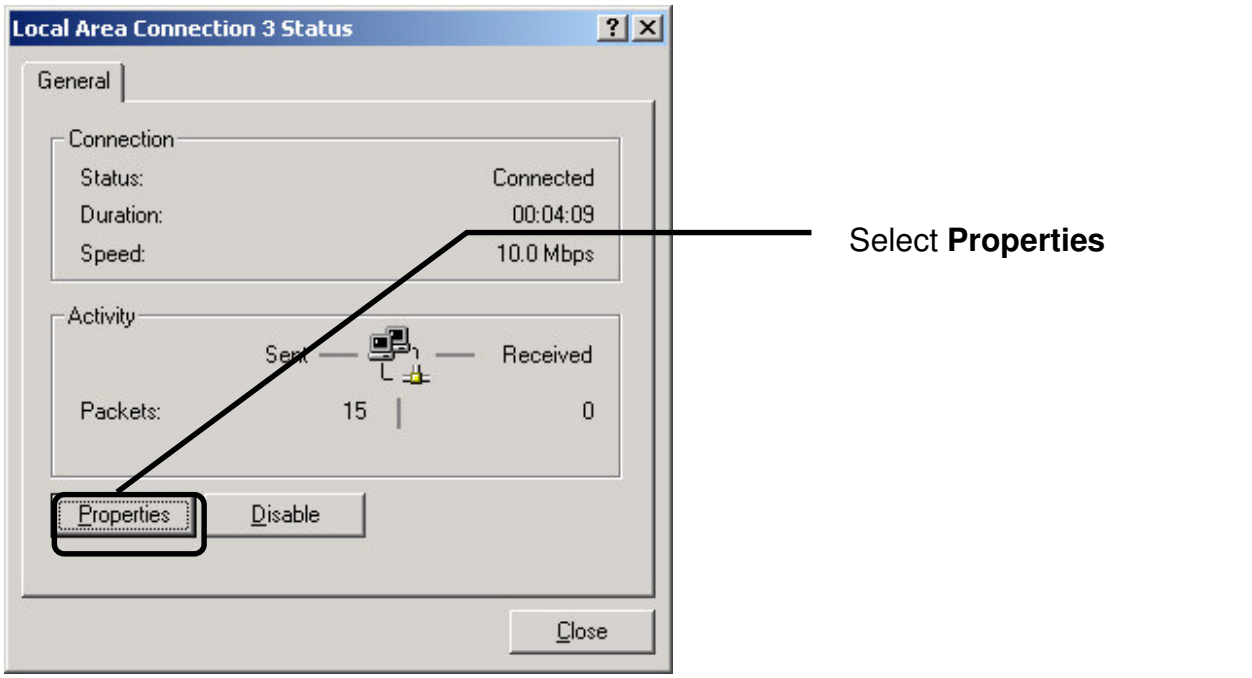


Figure 74: Select Properties Screen

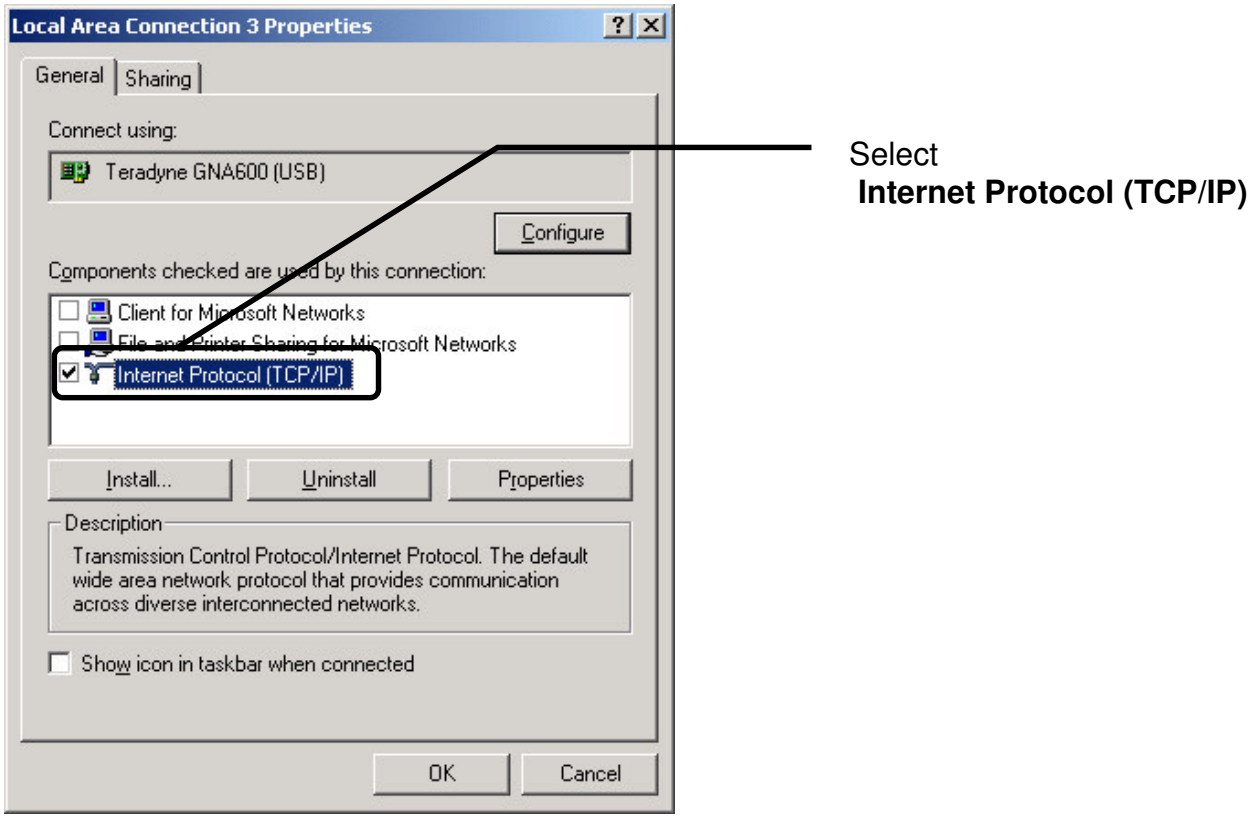
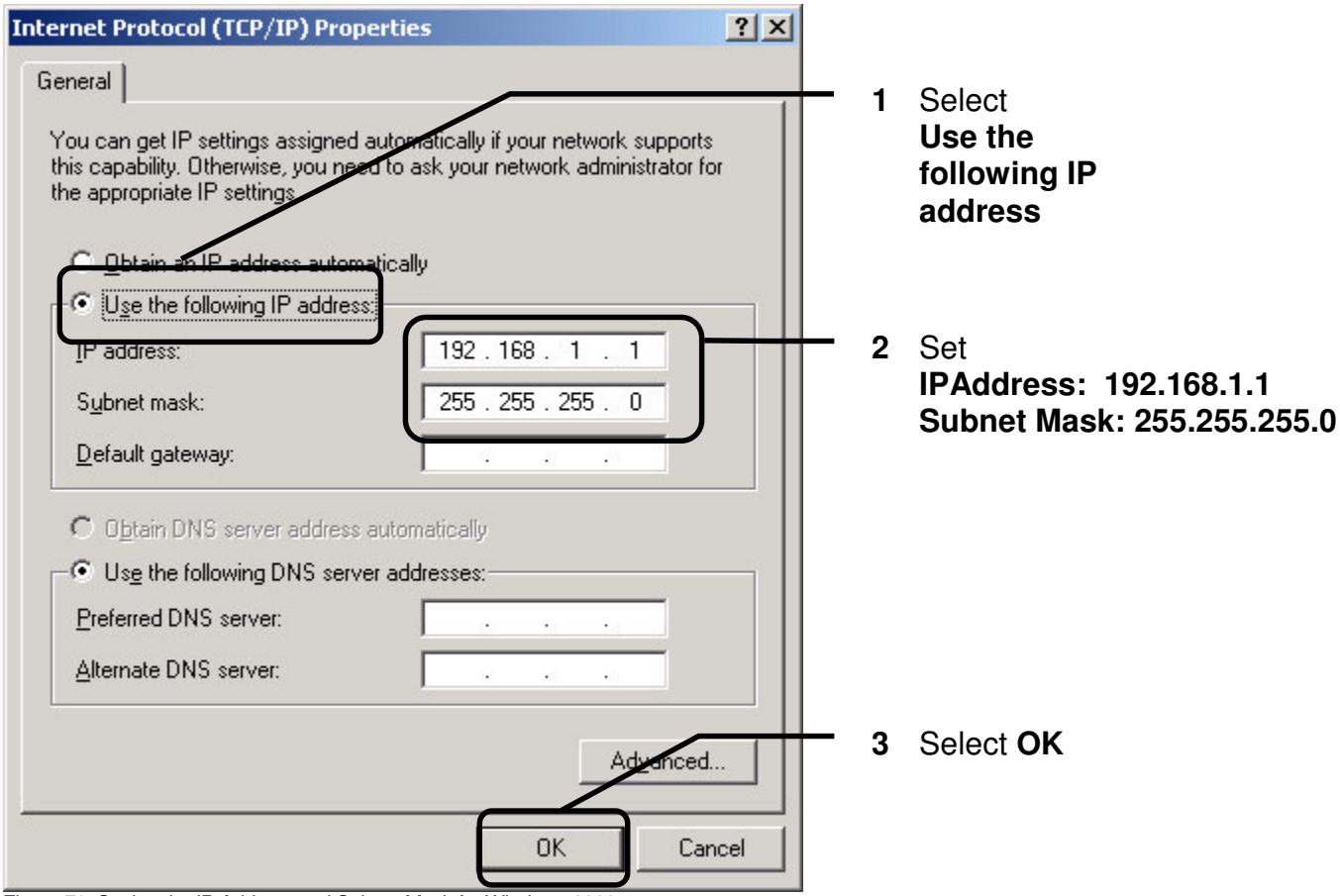


Figure 75: Select Internet Protocol (TCP/IP)


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 1 . 1
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel
1 Select Use the following IP address
2 Set IPAddress: 192.168.1.1 Subnet Mask: 255.255.255.0
3 Select OK
Figure 76: Setting the IP Address and Subnet Mask for Windows 2000

The DBS PC is now set up to communicate with your VCM using USB. You do not need to perform this step again unless you uninstall and reinstall DBS. To update your VCM using USB, follow the steps in Chapter 2, but use the USB cable instead of the network/Ethernet cable and DO NOT configure your DBS PC for Ethernet communication. You may continue to update your VCM using your network/Ethernet cable if you prefer.